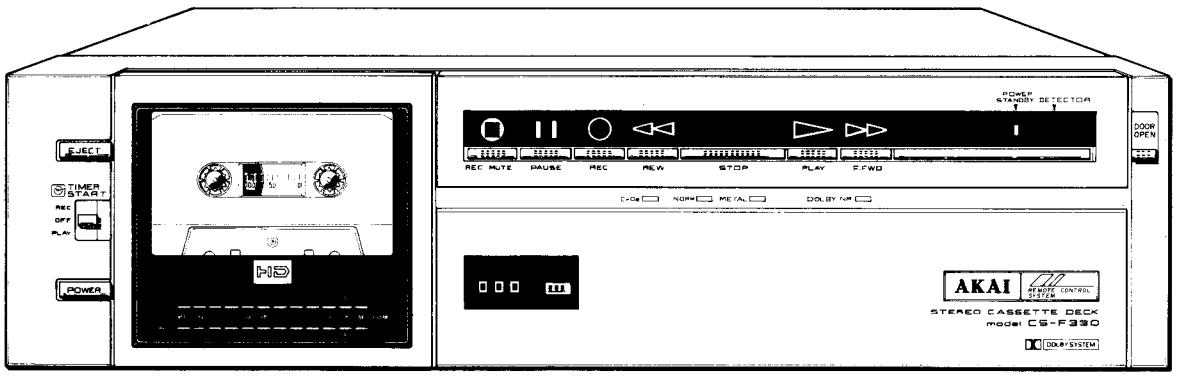
AKAI SERVICE MANUAL



STEREO CASSETTE DECK

MODEL CS-F330/T

REMOTE CONTROL UNIT

MODEL RC-330

STEREO CASSETTE DECK

MODEL CS-F330/T

REMOTE CONTROL UNIT

MODEL RC-330

THIS MANUAL IS APPLICABLE TO BOTH SILVER
AND BLACK PANEL MODELS

SECTION 1 MODEL CS-F330/T SERVICE MANUAL 3
SECTION 2 MODEL RC-330 SERVICE MANUAL 21
SECTION 3 PARTS LIST 27
SECTION 4 SCHEMATIC DIAGRAM 40

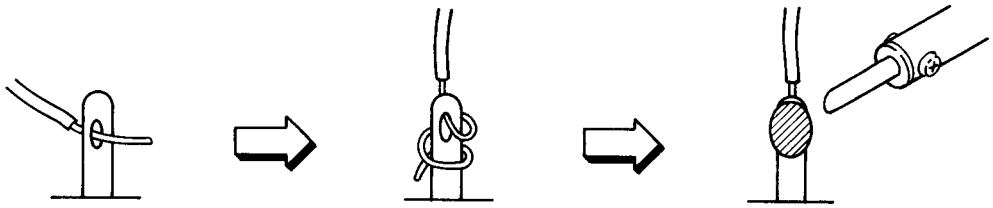
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

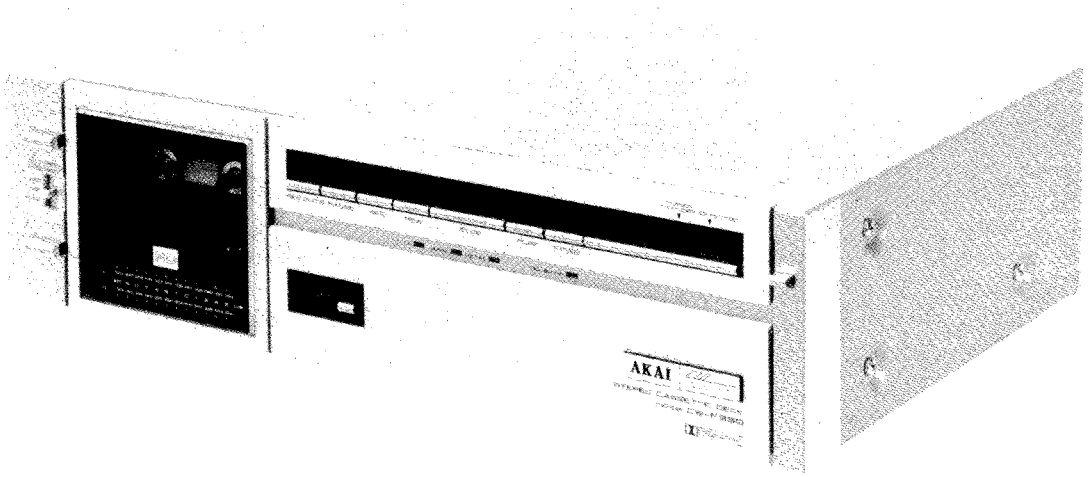
Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.



SECTION 1

SERVICE MANUAL

MODEL CS-F330/T

TABLE OF CONTENTS

I. SPECIFICATIONS 4
II. DISMANTLING OF UNIT 5
III. CONTROLS 6
IV. PRINCIPAL PARTS LOCATION 7
V. VOLTAGE CONVERSION 8
VI. MECHANICAL ADJUSTMENT 9
VII. HEAD ADJUSTMENT 11
VIII. AMPLIFIER ADJUSTMENT 12
IX. RECEIVER ADJUSTMENT (REMOTE CONTROL) 15
X. CLASSIFICATION OF VARIOUS P.C BOARDS 16
1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS 16
2. COMPOSITION OF VARIOUS P.C BOARDS 16

For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

TRACK SYSTEM	4 Track 2 Channel Stereo System
TAPE	Philips Type Cassette
TAPE SPEED	4.76 cm/s ± 1.0% (1-7/8 ips. ± 1.0%)
HEADS	Erase head × 1 High Density Metallic head for recording/playback × 1
MOTORS	Electronically speed controlled DC motor for Capstan drive × 1 DC motor for reel drive × 1
WOW & FLUTTER	Less than 0.04% WRMS, 0.11% (DIN 45500)
TAPE WINDING TIME	80 sec. using a C-60 cassette tape
FREQUENCY RESPONSE	Normal: 30 to 15,000 Hz ± 3 dB (–20 VU) CrO_2: 30 to 16,000 Hz ± 3 dB (–20 VU) 30 to 8,000 Hz ± 3 dB (0 VU) Metal: 30 to 18,000 Hz ± 3 dB (–20 VU) 30 to 12,000 Hz ± 3 dB (0 VU)
SIGNAL TO NOISE RATIO	Normal: Better than 57 dB CrO_2: Better than 59 dB Metal: Better than 59 dB (measured via tape with peak recording level) Dolby NR switch ON: improves up to 10 dB above 5 kHz
HARMONIC DISTORTION	Normal: Less than 0.8% CrO_2: Less than 0.8% Metal: Less than 0.8%
INPUT	MIC: 0.25 mV (input impedance 5.0 kohms) Required microphone impedance: 600 ohms Line: 70 mV (input impedance 47 kohms)
OUTPUT	Line: 410 mV at 0 VU Required load impedance: more than 20 kohms
POWER REQUIREMENTS	120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/120V/220V/240V, 50/60 Hz internally switchable for other countries.
DIMENSIONS	440(W) × 125(H) × 288(D) mm (17.3 × 4.9 × 11.3")
WEIGHT	6.95 kg (15.3 lbs)

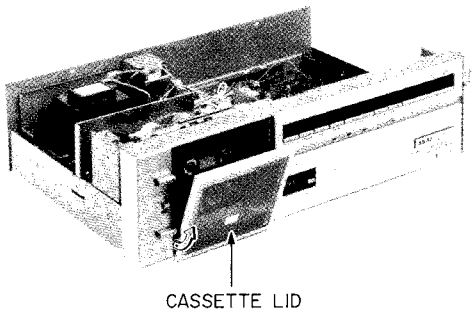
* For improvement purposes, specifications and design are subject to change without notice.

* "Dolby" and the Double D symbol are trademarks of Dolby Laboratories.
(Manufactured under license from Dolby Laboratories.)

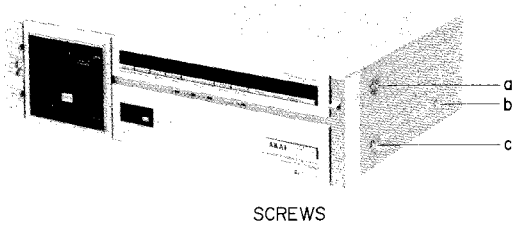
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

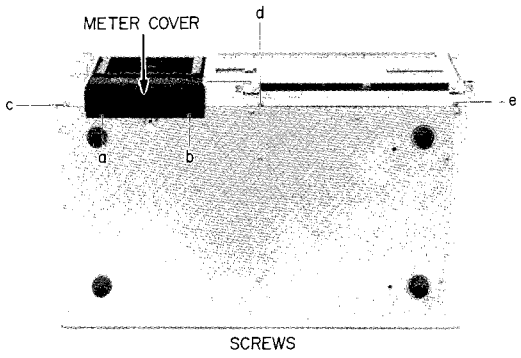
4



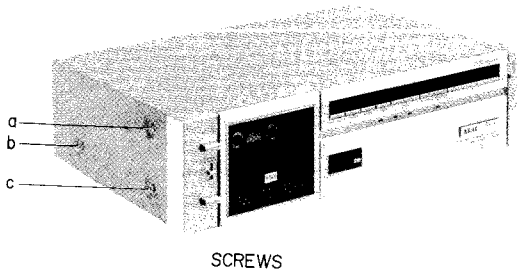
1



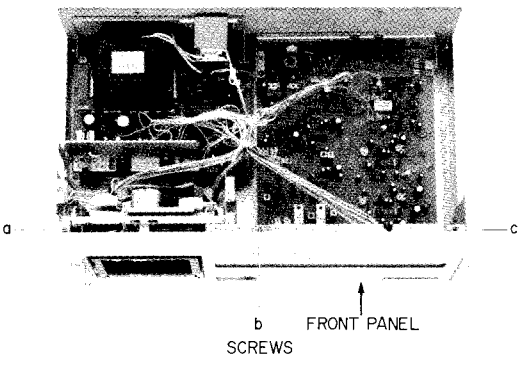
5



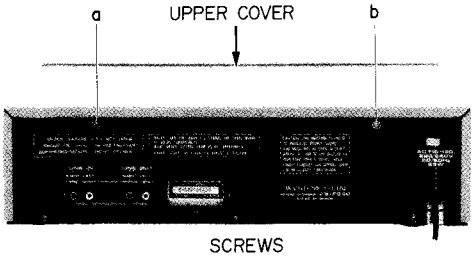
2



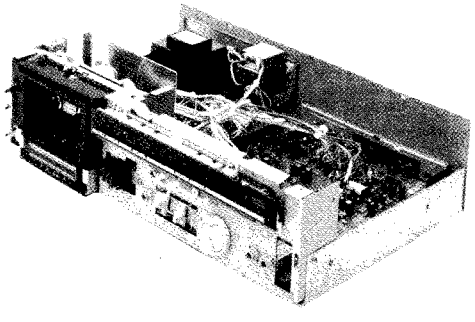
6



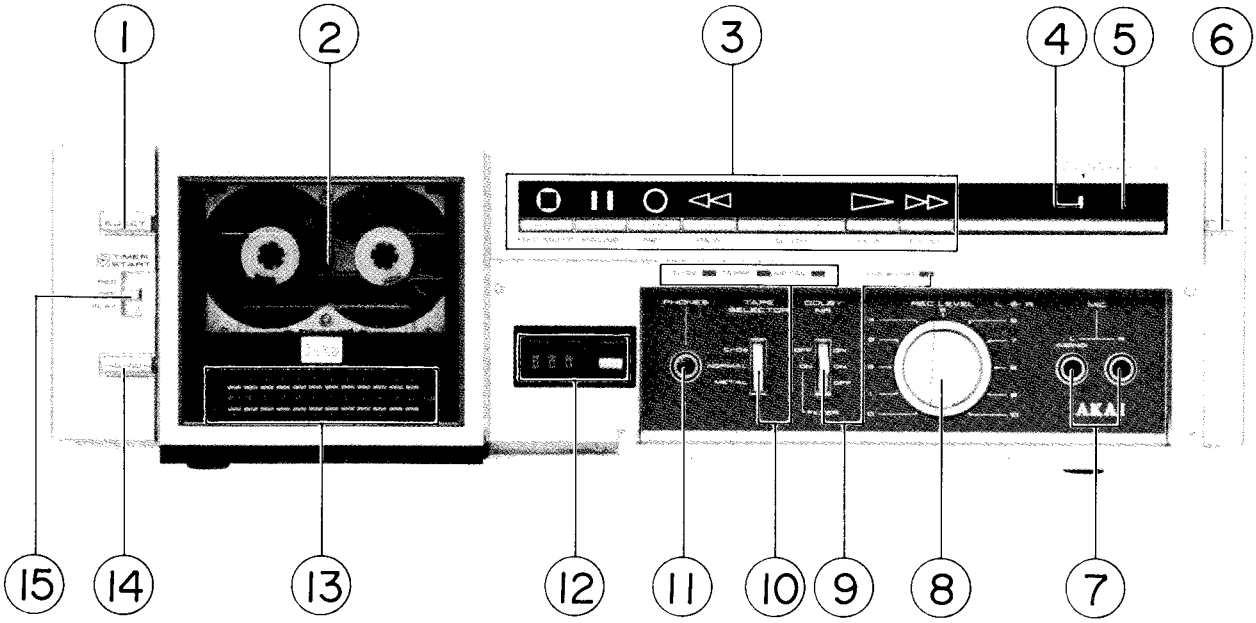
3



7



III. CONTROLS



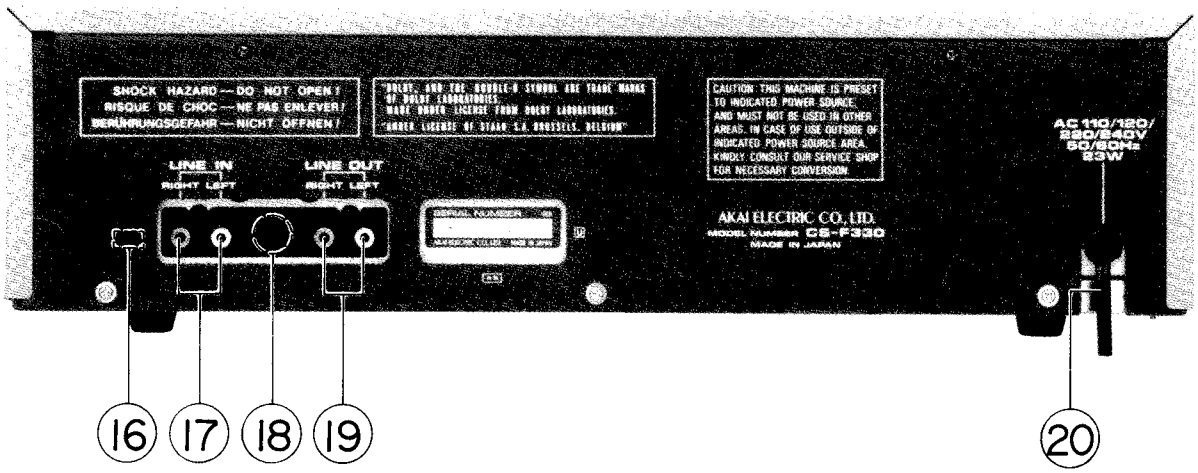

SHOCK HAZARD — DO NOT OPEN !
RISQUE DE CHOC — NE PAS ENLEVER !
BERÜHRUNGSGEFAHR — NICHT ÖFFNEN !
CAUTION: THIS MACHINE IS PRESET TO INDICATED POWER SOURCE, AND MUST NOT BE USED IN OTHER AREAS. IN CASE OF USE OUTSIDE OF INDICATED POWER SOURCE AREA, KINDLY CONSULT OUR SERVICE SHOP FOR NECESSARY CONVERSION.
AC 110/120/220/240V 50/60Hz 23W
LINE IN
RIGHT LEFT
LINE OUT
RIGHT LEFT
AKAI ELECTRIC CO. LTD.
MODEL NUMBER GX-F330
MADE IN JAPAN
16
17
18
19
20

Fig. 1 Controls

1. EJECT BUTTON
2. CASSETTE RECEPTACLE
3. OPERATING BUTTONS
4. POWER STANBY INDICATOR
5. DETECTOR
6. DOOR OPEN BUTTON
7. MICROPHONE JACKS
8. LEFT —•— RIGHT RECORDING LEVEL CONTROLS
9. DOLBY NR and FILTER SWITCH and INDICATOR
10. TAPE SELECTOR
11. HEADPHONE JACK
12. TAPE COUNTER and RESET BUTTON
13. LED BAR METERS
14. POWER SWITCH
15. TIMER START SELECTOR
16. LINE/DIN SELECTOR
    (Some models do not have this facility)
17. LINE IN JACKS
18. DIN JACK
    (Some models do not have this facility)
19. LINE OUT JACKS
20. AC CORD
    (AC Inlet for some country)

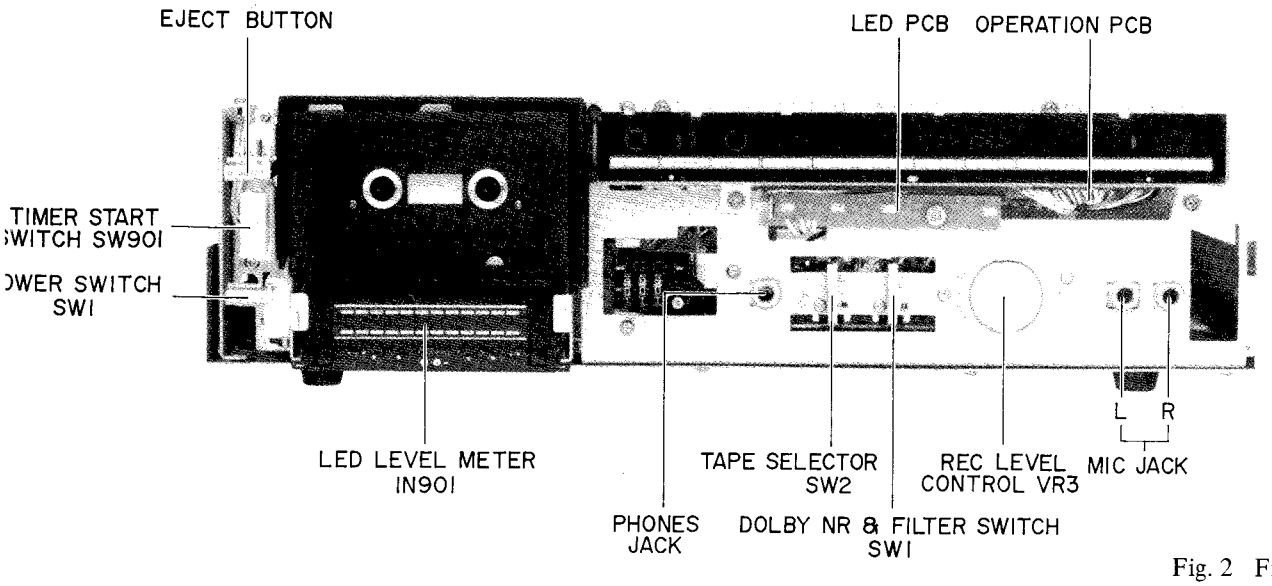


Fig. 2 Front View

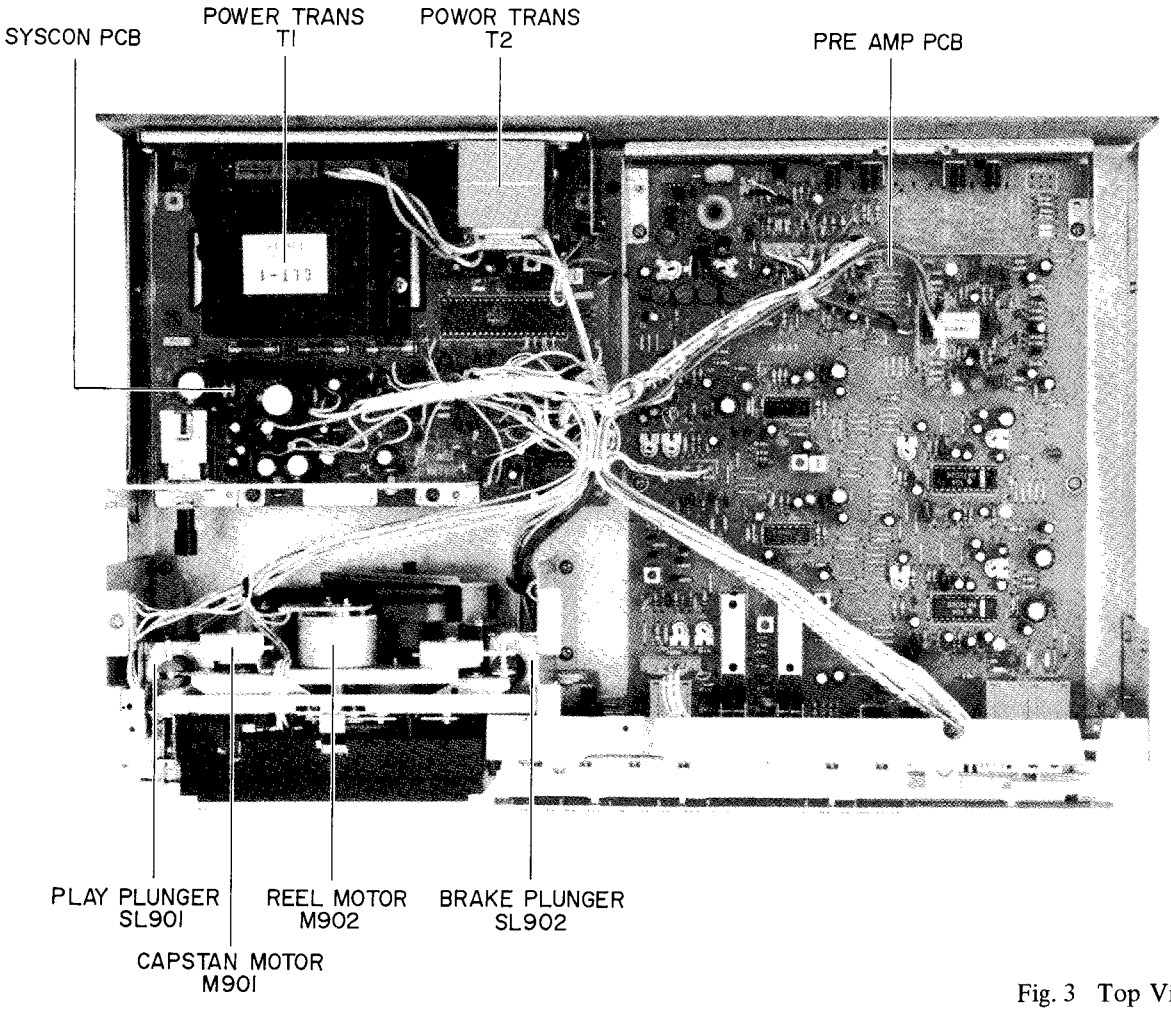


Fig. 3 Top View

V. VOLTAGE CONVERSION

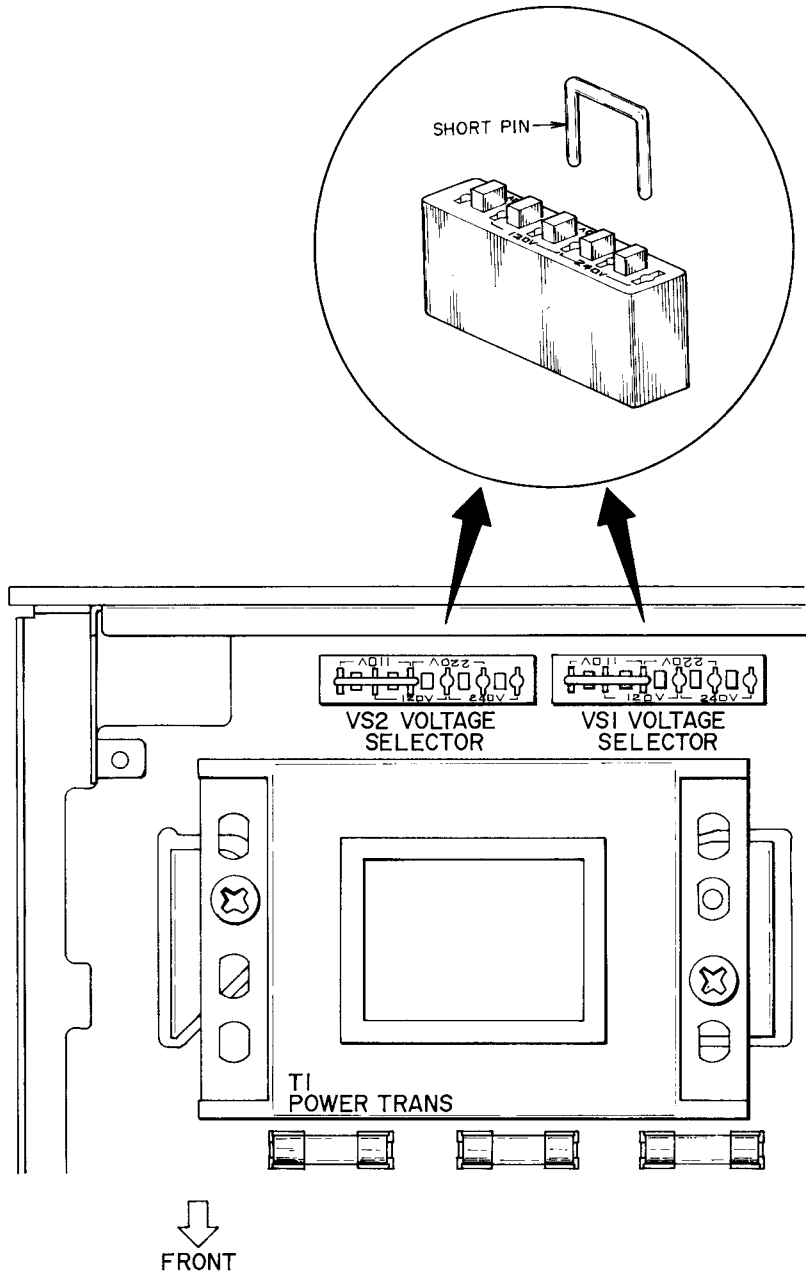


Fig. 4 Voltage Conversion (U Model only)

1. VOLTAGE CONVERSION

Models for canada, Europe, USA, UK and Australia are not equipped with this facility.

Each machine is preset at the factory according to destination, but some machines can be set to 110V, 120V, 220V or 240V as required.

If voltage change is necessary, this can be accomplished as follows:

1) Disconnect power cord.
2) Loosen holding screws and remove upper cover.
3) Remove short pin plug from present holes and replace in correct holes. Follow the markings explicitly.

1. FLYWHEEL LOOSE PLAY ADJUSTMENT
(Refer to Fig. 5)

Adjust the screw (a) so that the flywheel moves 0.1 – 0.2 mm in the direction indicated by the arrow.

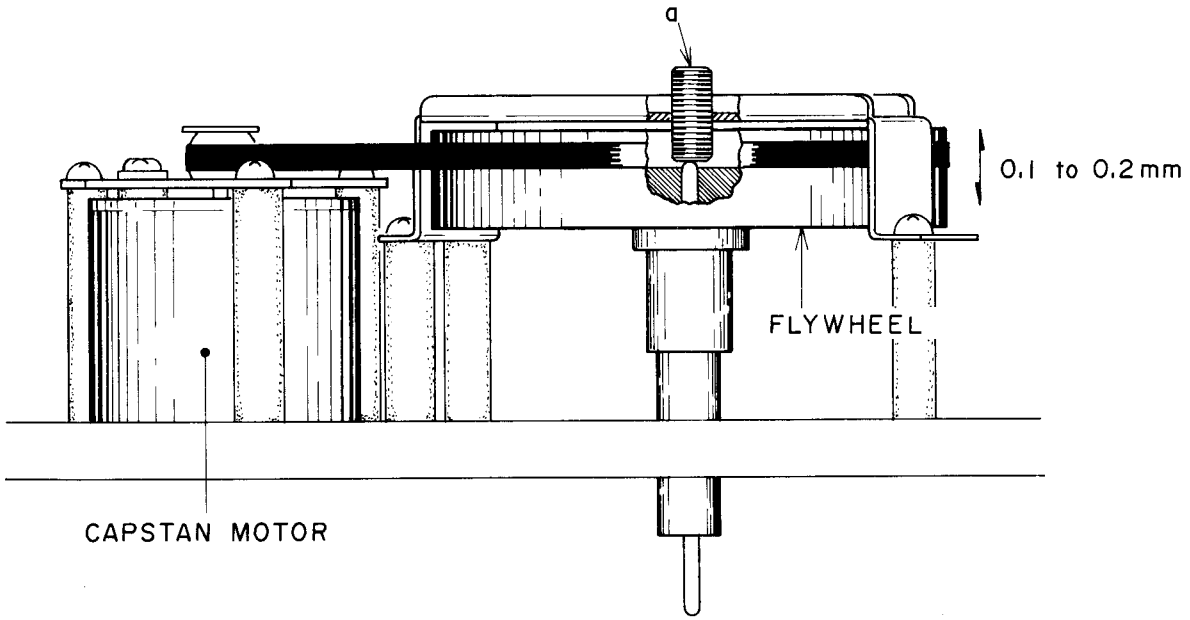


Fig. 5

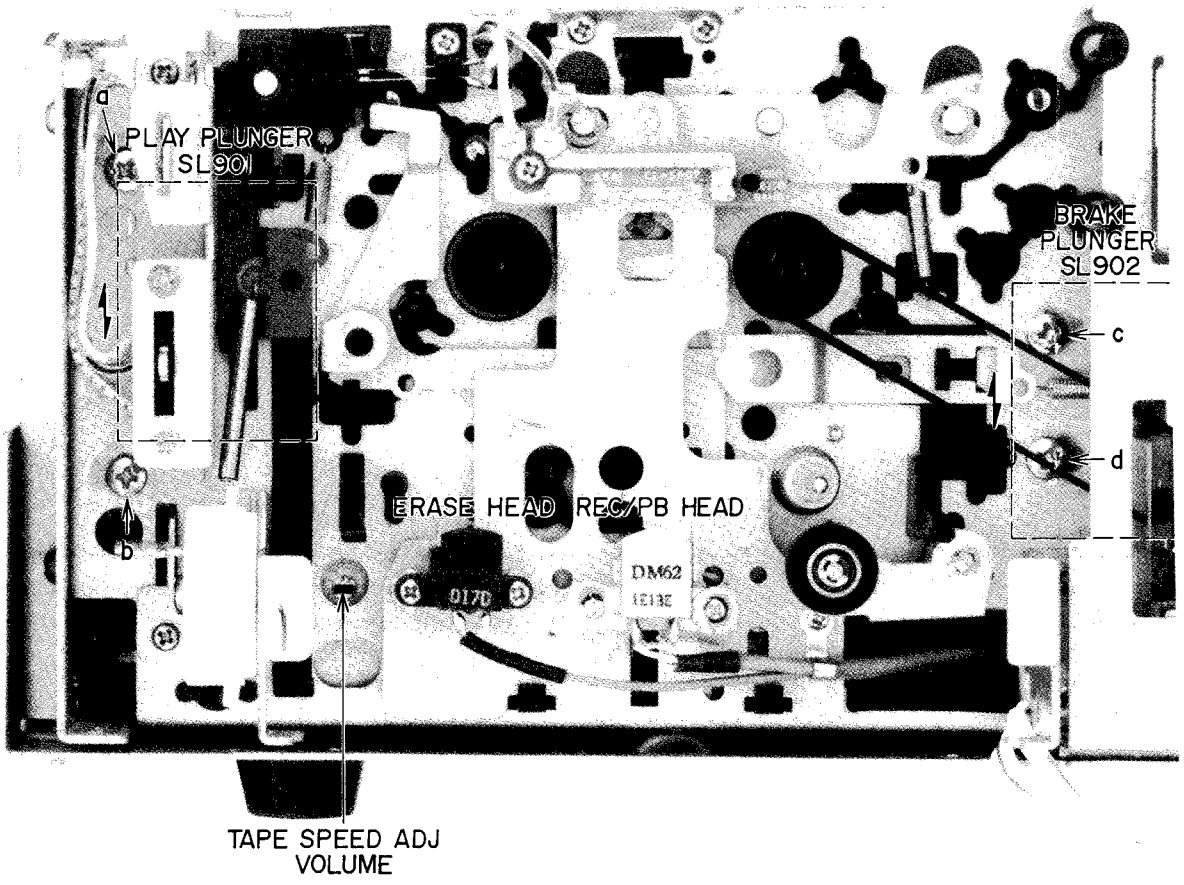


Fig. 6

2. PLUNGER POSITIONING

(Refer to Figs. 6, 7)

1) Play Plunger Adjustment
   Set the Akai Head Projection Gauge. Adjust the screws (a) and (b) so that when PAUSE mode is engaged, the Head Projection Gauge indicates to 2.5 mm ±0.05 mm.
2) Brake Plunger Adjustment
   Set the Akai Head Projection Gauge. Adjust the screws (c) and (d) so that when play mode is engaged, the Head Projection Gauge indicates to 3.5 mm ±0.15 mm.

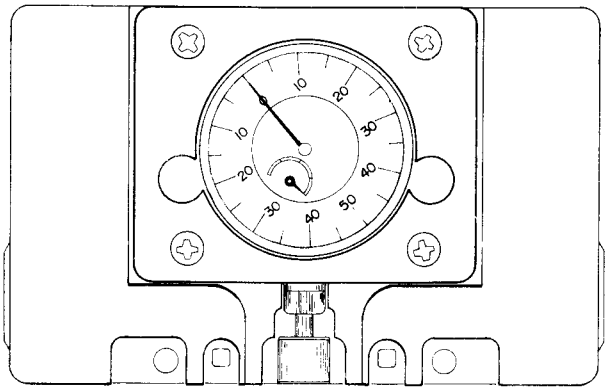


Fig. 7 AKAI Head Projection Gauge

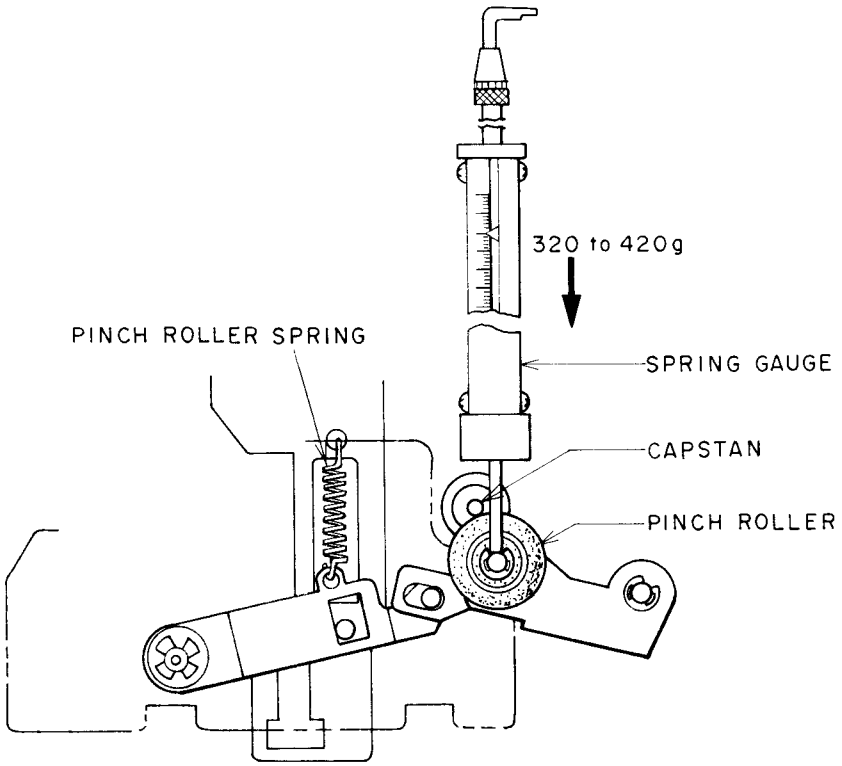


Fig. 8

3. PINCH ROLLER PRESSURE MEASUREMENT (Refer to Fig. 8)

At playback mode, push the pinch roller with a spring gauge until the pinch roller separates from the capstan by about 1 mm to 2 mm and then gently return. Take a reading of the spring gauge indication at the moment the pinch roller touches the capstan and begins to rotate.

Specified Pinch Roller Pressure: 320 – 420g

4. VARIOUS TORQUE MEASUREMENT

Use the Cassette Torque Meter to confirm that the value of each mode is as follows:

Take-up Torque	35 ~ 50 g-cm
Back Tension	2 ~ 4 g-cm
FF/RWD Torque	85 ~ 130 g-cm

5. TAPE SPEED ADJUSTMENT

(Refer to Fig. 6)

Playback a 1,000 Hz pre-recorded test tape and adjust the tape speed adjustment volume to obtain a tape speed of 1,000 Hz ±5 Hz.

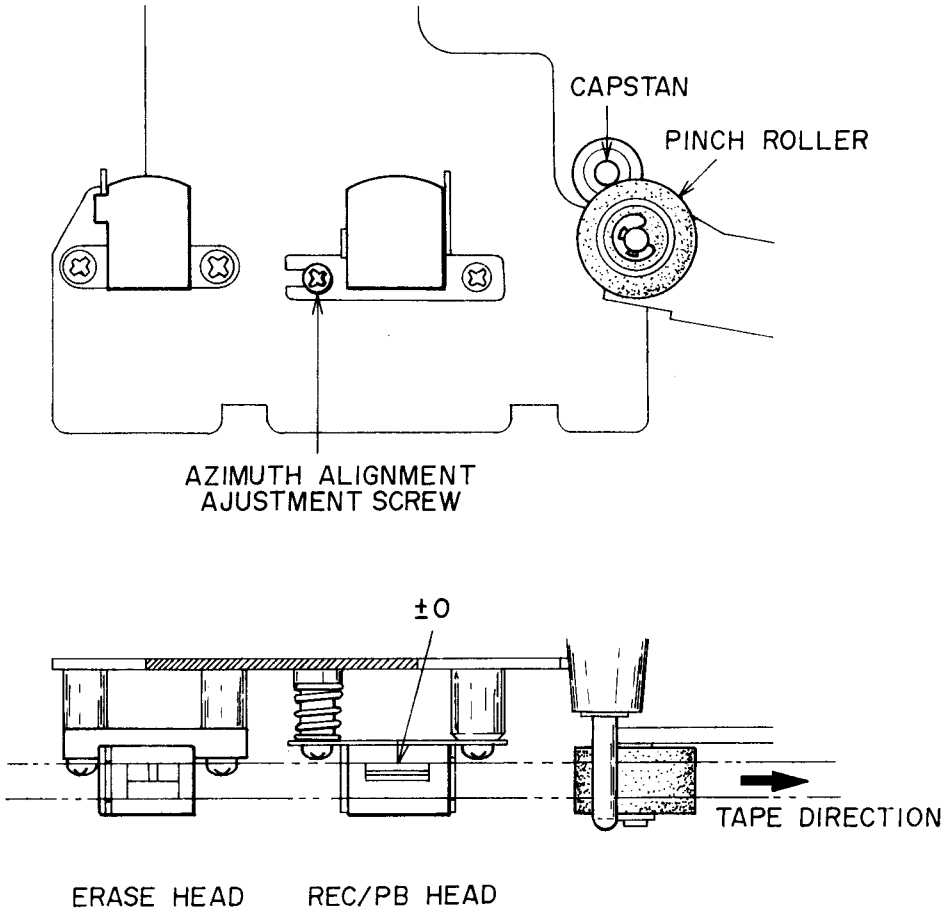


Fig. 9

1. RECORDING/PLAYBACK HEAD AZIMUTH ALIGNMENT (Refer to Fig. 9)

a) Playback a 10 kHz pre-recorded cassette azimuth alignment test tape and adjust screw shown in Fig. 9 to obtain maximum output on both channels.

b) Invert cassette and confirm that the output level does not change from that obtained in Item 1-a) above.
If the output level differs, adjust in the same way as in Item 1-a) above until both sides of the test tape display equal output.

NOTES:

1. Be sure to clean the heads prior to head adjustment.
2. Be careful not to use a magnetized driver or other magnetized tools in the vicinity of the heads.
3. Be sure to demagnetize the heads with a Head Demagnetizer before and after head adjustment.

VIII. AMPLIFIER ADJUSTMENT (Refer to Fig 10 to 13)

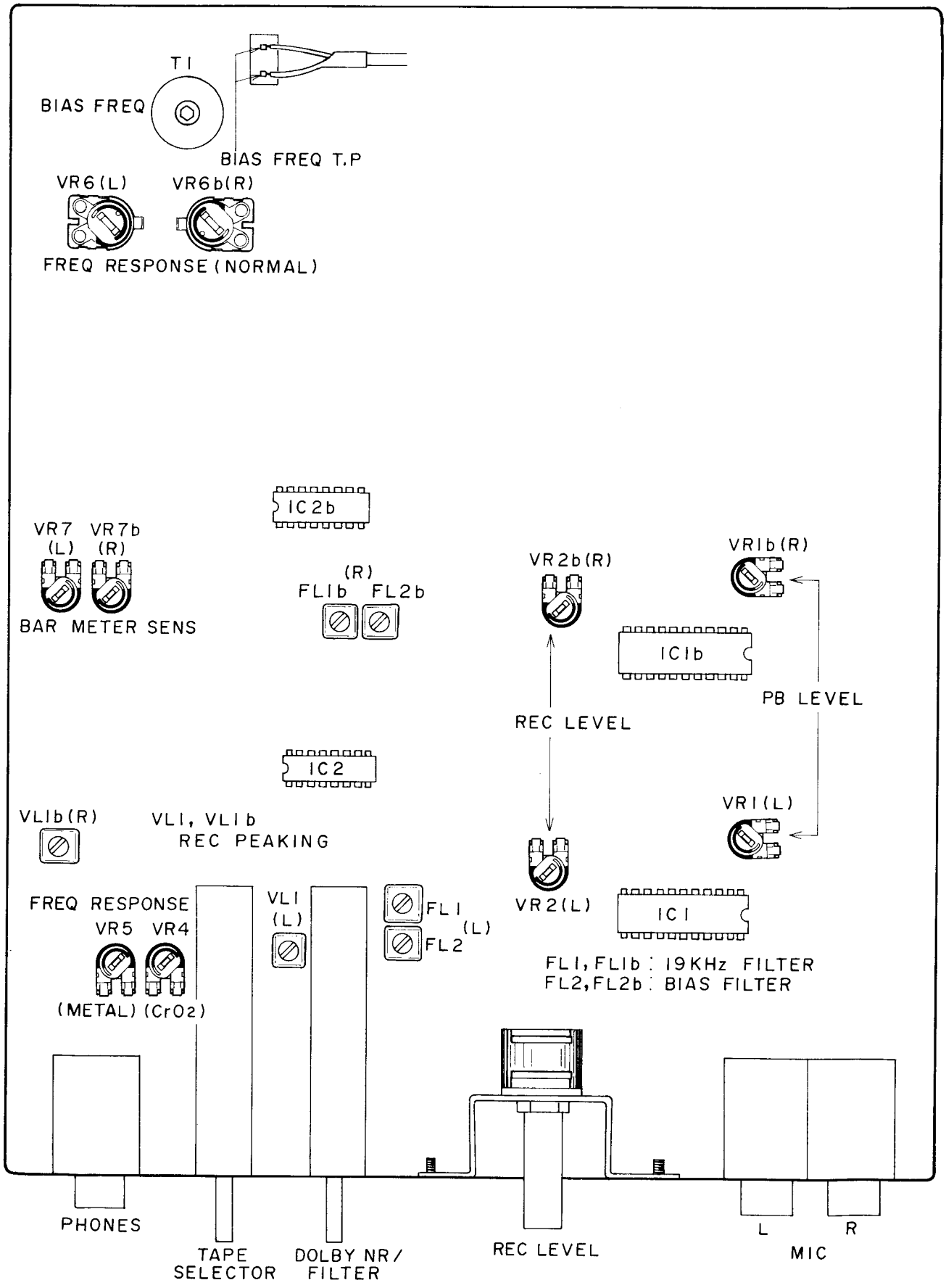


Fig. 10 Amplifier Adjustment

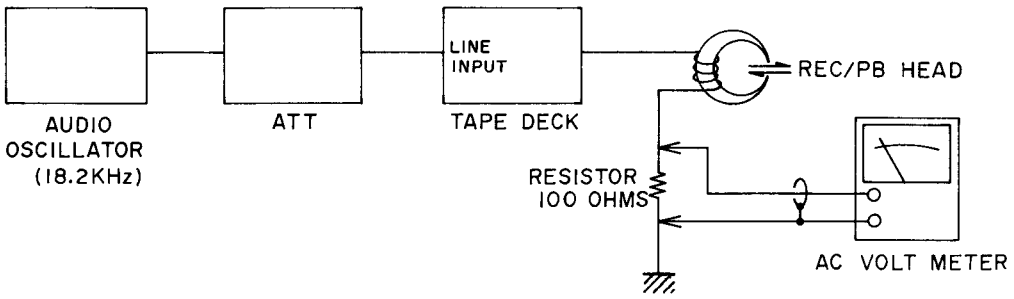


Fig. 11 Rec Peaking Adjustment

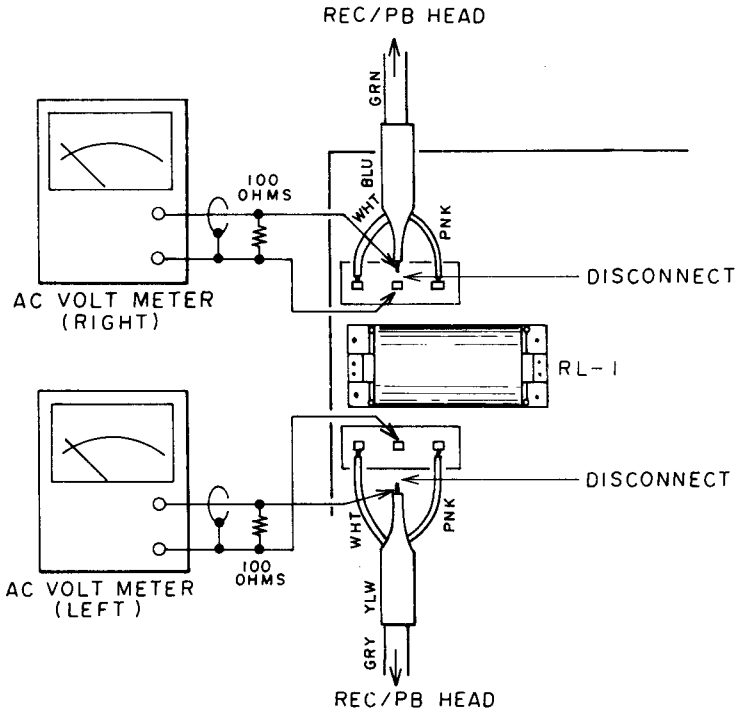


Fig. 12 Rec Peaking Adjustment

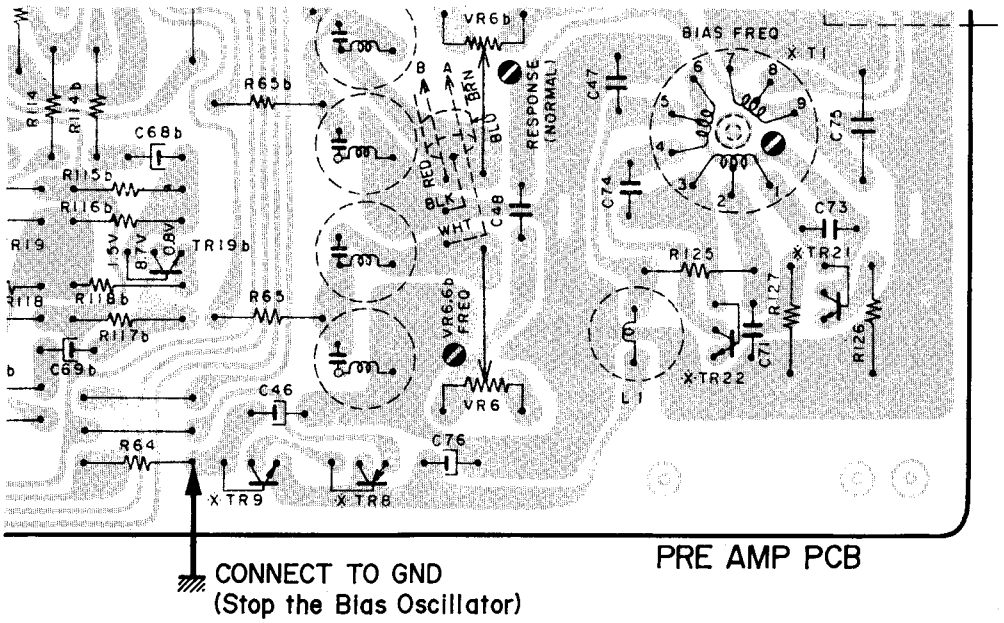


Fig. 13 Rec Peaking Adjustment

Step	Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Result	Remarks
1	Playback Level	333 Hz, 0 VU Test Tape	PB	VR1 50 kB	−5.5 ± 0.5 dBm (410 mV)	
2	Bar Meter Sensitivity	1,000 Hz −5.5 dBm from oscillator	REC	VR7 20 kB	0 VU indication	
3	REC Peaking	18.2 kHz from Oscillator	REC	VL1 15 mH	Maximum AC Voltmeter indication	Set tape selector to Metal position. Fig. 11, 12, 13.
4	Bias Frequency	No signal input	REC	T1	100 kHz	Connect a Frequency Counter to T.P. Set tape selector to Metal Position.
5	Normal Position Frequency Response	Normal Blank tape 1,000 Hz, 10,000 Hz −25.5 dBm recording	REC /PB	VR6 100 kB	1,000 Hz to 10,000 Hz flat	
6	CrO_2 Position Frequency Response	CrO_2 Blank tape 1,000 Hz, 10,000 Hz −25.5 dBm recording	REC /PB	VR4 200 kB	1,000 Hz to 10,000 Hz flat	Set tape selector to CrO_2 position.
7	Metal Position Frequency Response	Metal Blank tape 1,000 Hz, 10,000 Hz −25.5 dBm recording	REC /PB	VR5 30 kB	1,000 Hz to 10,000 Hz flat	Set tape selector to Metal position.
8	Recording Level	Normal Blank tape 1,000 Hz, −5.5 dBm recording	REC /PB	VR2 20 kB	−5.5 ± 0.5 dBm	
9	Distortion Factor Confirmation	1,000 Hz −5.5 dBm recording	REC /PB		Normal < 0.8% CrO_2 < 0.8% Metal < 0.8%	NOTE 6.
10	Bias Filter	No signal input	REC	FL2	AC Voltmeter indicates to minimum	Set tape selector to Metal position. Set REC Volume to maximum NOTE 8.
11	19 kHz Filter Adjustment	19 kHz form oscillator	REC	FL1	AC Voltmeter indicates to minimum	Set Dolby NR switch to ON, Filter ON position. NOTE 7, 8.

NOTES: 1. Input selector switch to LINE.
(The U, C and A Models do not have this facility.)
2. Because each of these adjustments is vital to perfect Dolby NR circuit operation, ensure that they are carried out with as few errors as possible.
3. Except for Step 3, 4, 6, 7, 9 and 10, set Tape Selector to NORMAL Position.
4. Except for Step 11, set Dolby NR switch to OFF Position
5. Use the following cassette measuring tapes:

Normal Tape:	Maxell	UD	C-60
CrO_2 Tape:	TDK	SA	C-60
Metal Tape:	TDK	MA-C	C-60

6. If it does not comply with the specifications, repeat Steps 5 to 8 and readjust.
7. Adjust the oscillator's frequency to give a frequency counter reading of 19.00 kHz.
8. Unless the core is moved unintentionally this adjustment is not necessary.

IX. RECEIVER ADJUSTMENT (REMOTE CONTROL)

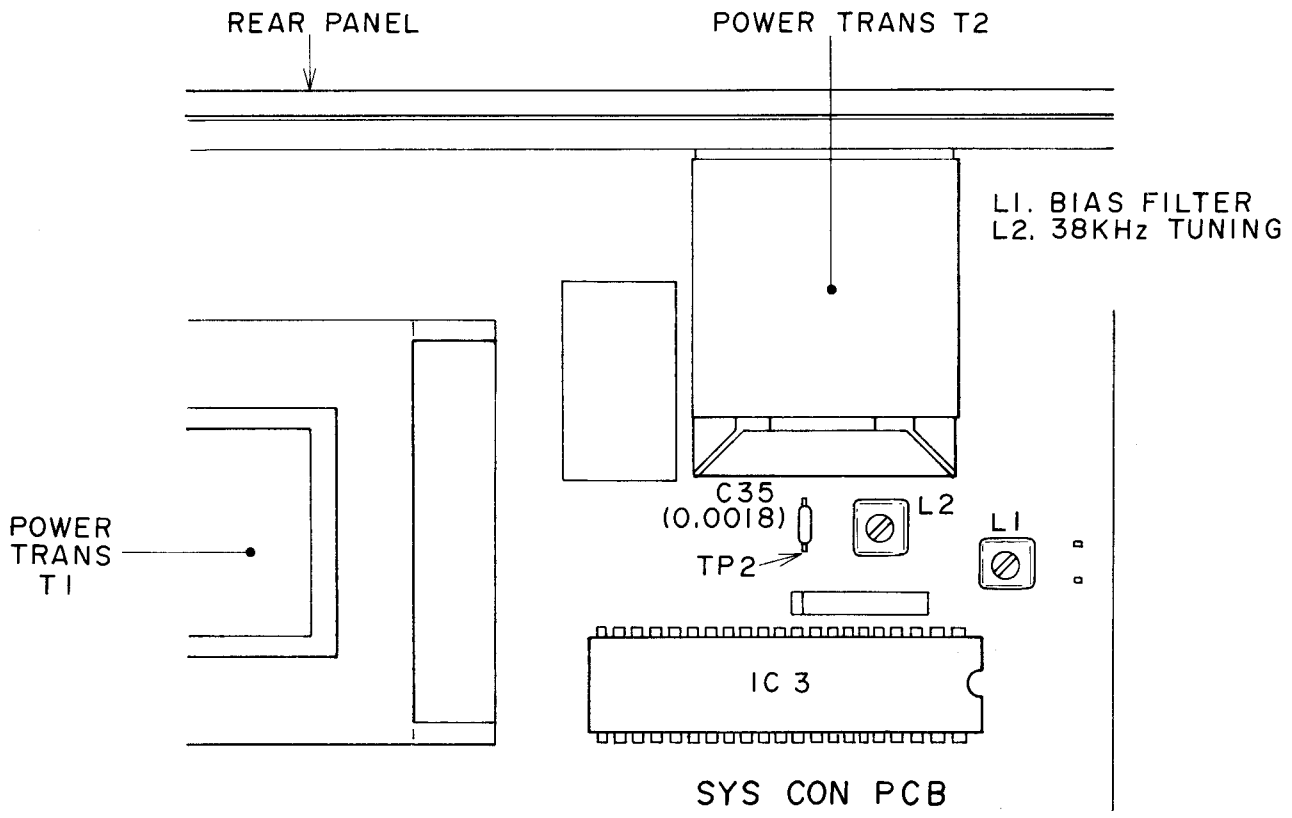


Fig. 14

1. 38 kHz TUNING COIL ADJUSTMENT (Refer to Fig. 14)

1) Connect an oscilloscope to TP2.
2) Keep pushing the REC MUTE button on the remote control unit, and observe the waveform at TP2.
3) Change the direction of the remote control unit to decrease the input to the detector as much as possible (for example by transmitting toward the wall and receiving the reflected wave).
4) Adjust L2 so that the amplitude of the waveform at TP2 increases to the maximum.

NOTE: If the waveform amplitude remains unchanged when L2 is turned, it is because the input level is so high as to cause the receiving circuit's AGC to work. In this case, adjust after reducing the input to the detector.

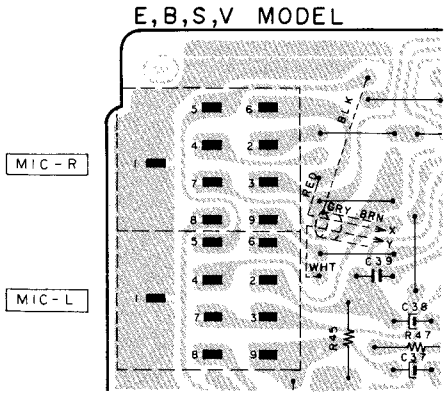
X. CLASSIFICATION OF VARIOUS P.C BOARDS

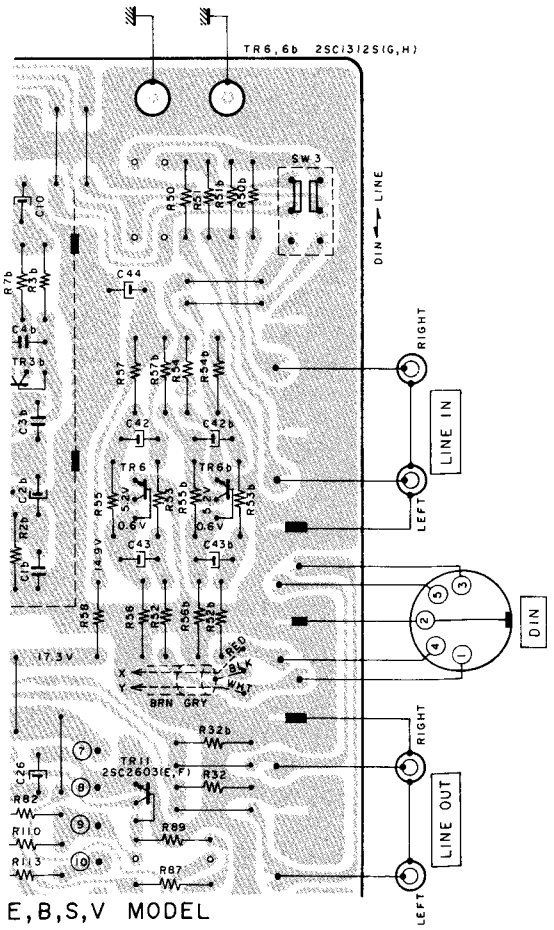
1. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

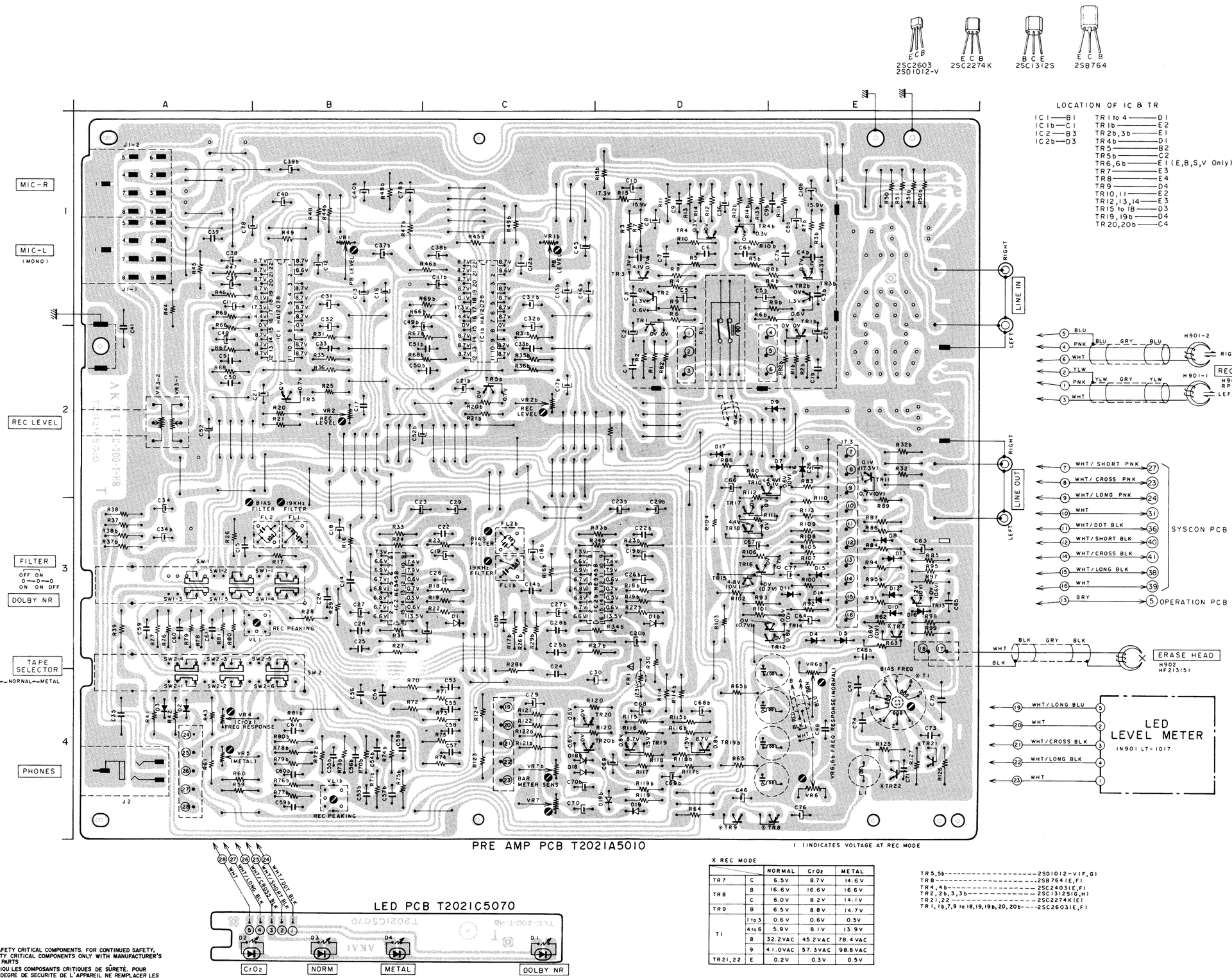
P.C Board Title	P.C Board Number
Syscon P.C Board (U)	T2021B502A
Syscon P.C Board (C, A)	T2021B504A
Syscon P.C Board (E, B, S, V)	T2021B505A
Pre Amp P.C Board	T2021C5010
Operation P.C Board	T2021C5060
LED P.C Board	T2021C5070
Detector P.C Board (U)	T2021B502B
Detector P.C Board (C, A)	T2021B504B
Detector P.C Board (E, B, S, V)	T2021B505B
PHOTO LED P.C Board (U)	T2021B502C
PHOTO LED P.C Board (C, A)	T2021B504C
PHOTO LED P.C Board (E, B, S, V)	T2021B505C
Filter P.C Board	CL-5026
Lamp P.C Board	CL-5009

2. COMPOSITION OF VARIOUS P.C BOARDS

1) PRE AMP P.C BOARD T2021A5010 and LED P.C BOARD T2021C5070







* REC MODE

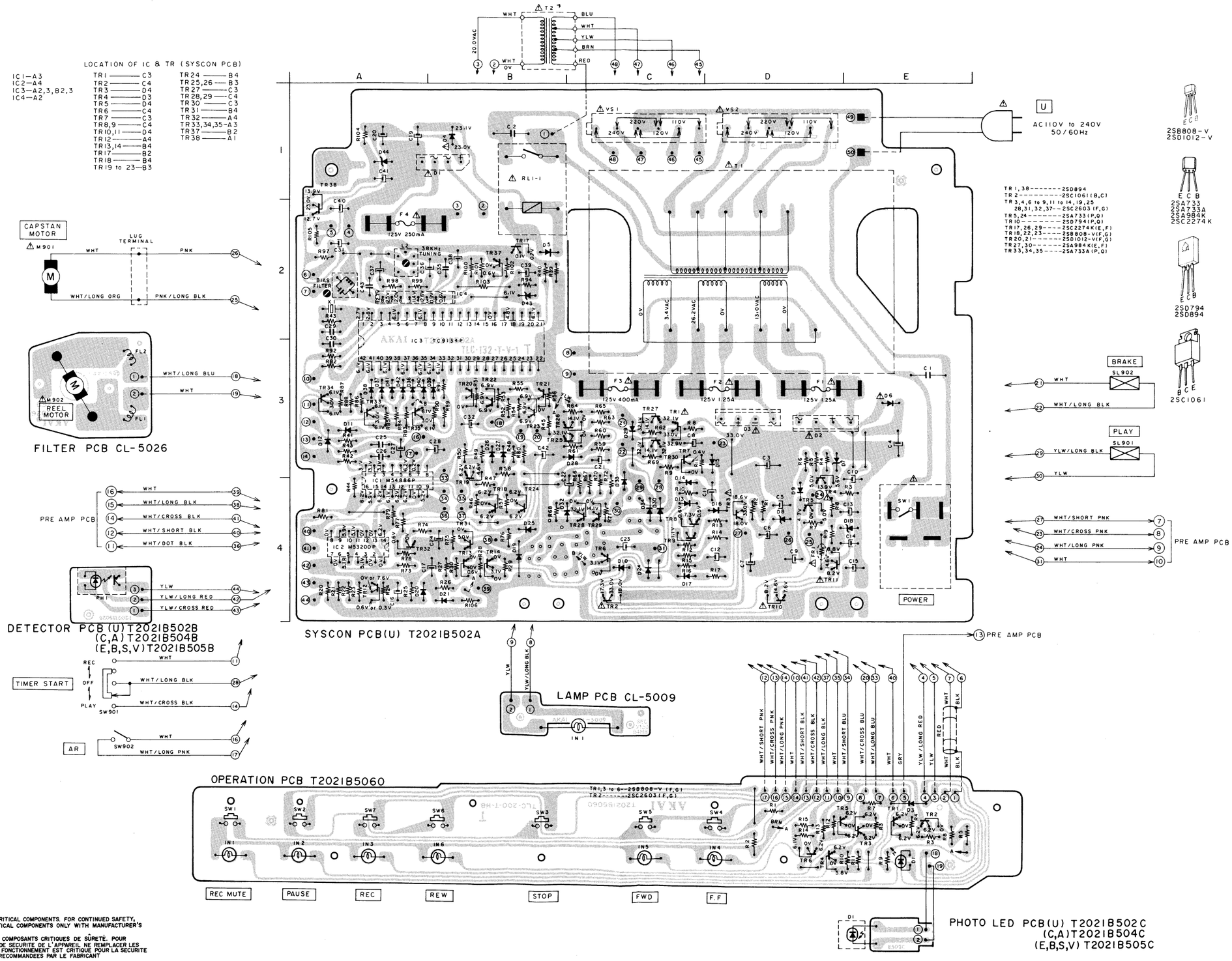
		NORMAL	CrO2	METAL
TR7	C	6.5V	8.7V	14.6V
TR8	B	16.6V	16.6V	16.6V
	C	6.0V	8.2V	14.1V
TR9	B	6.5V	8.8V	14.7V
T1	1 to 3	0.6V	0.6V	0.5V
	4 to 6	5.9V	8.1V	13.9V
	8	32.2VAC	45.2VAC	78.4VAC
	9	41.0VAC	57.3VAC	98.8VAC
TR21,22	E	0.2V	0.3V	0.5V

TR5,5b----------2SD1012-V(F,G)
TR8----------2SB764(E,F)
TR4,4b----------2SC2403(E,F)
TR2,2b,3,3b----------2SC1312S(G,H)
TR21,22----------2SC2274K(E)
TR1,1b,7,9 to 18,19,19b,20,20b----2SC2603(E,F)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

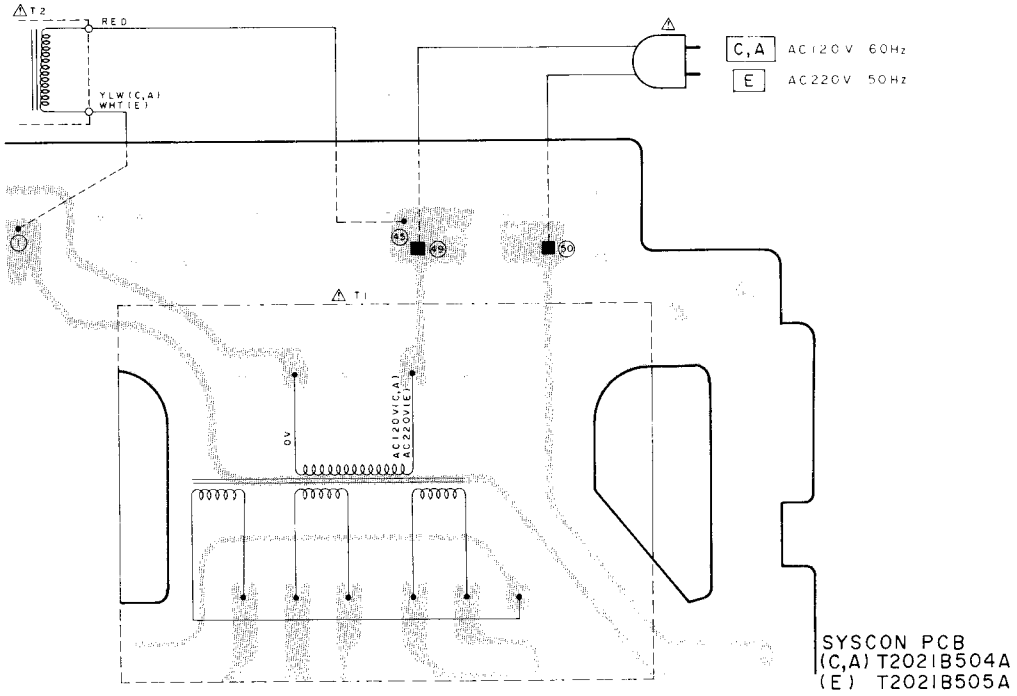
AVERTISSEMENT: ⚠IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

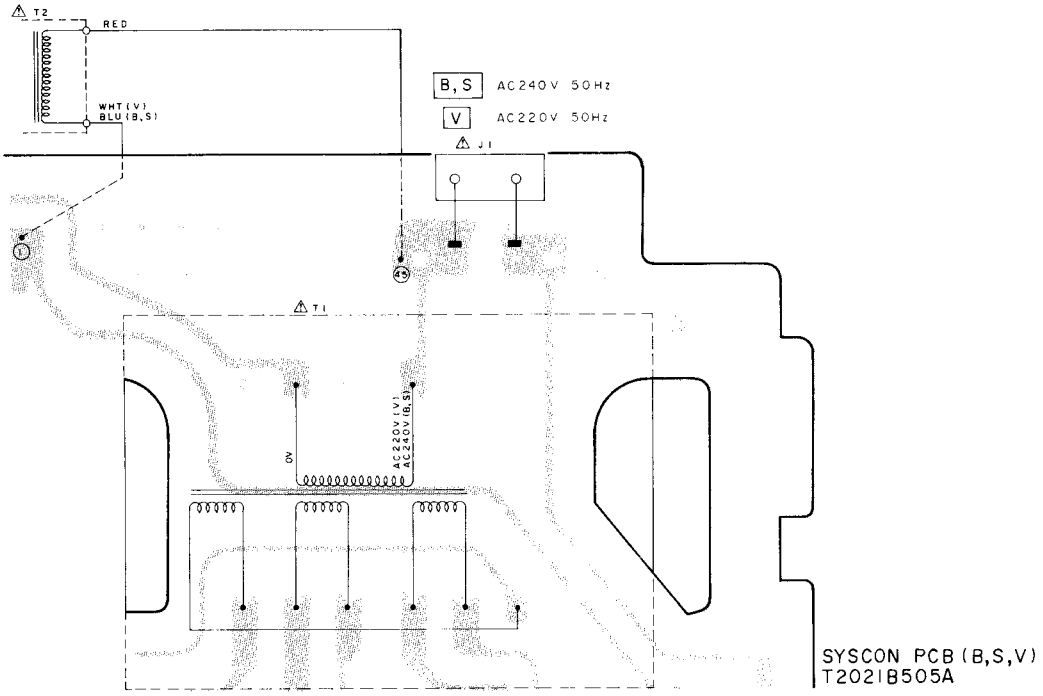
2) SYSCON P.C BOARD (U) T2021B502A, OPERATION P.C BOARD T2021B5060, FILTER P.C BOARD CL-5026, DETECTOR P.C BOARD (U) T2021B502B, PHOTO LED P.C BOARD (U) T2021B502C and LAMP P.C BOARD CL-5009



WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

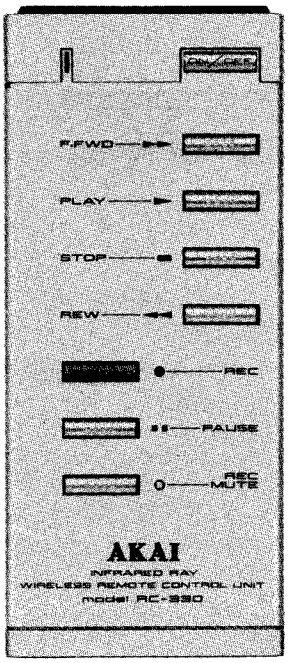
AVERTISSEMENT: ⚠IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT





WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT



SECTION 2

SERVICE MANUAL

MODEL RC-330

TABLE OF CONTENTS

I. SPECIFICATIONS 22
II. CONTROLS 22
III. COMPOSITION OF P.C BOARDS 23

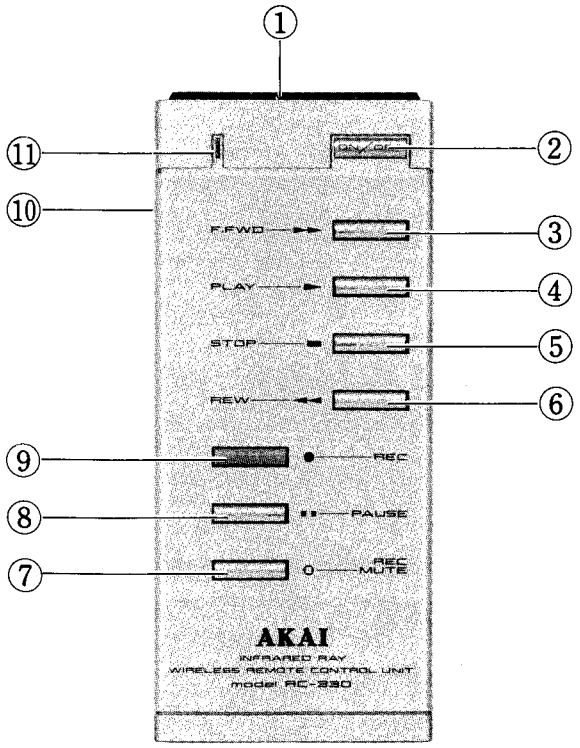
For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

SYSTEM	Infrared Ray PCM System
CARRIER FREQUENCY	38 kHz
AREA OF OPERATION	8 m on axis (at DC 3V)
DIRECTIVITY	±30° (at 5 m)
POWER REQUIREMENTS	DC 3V (two SUM-3, AM, AA or R6 size batteries)
DIMENSIONS	70(W) x 20(H) x 162(D) mm (6.7 x 0.8 x 6.4 inches)
WEIGHT	140 g (without batteries) (4.9 oz.)

* For improvement purposes, specifications and design are subject to change without notice.

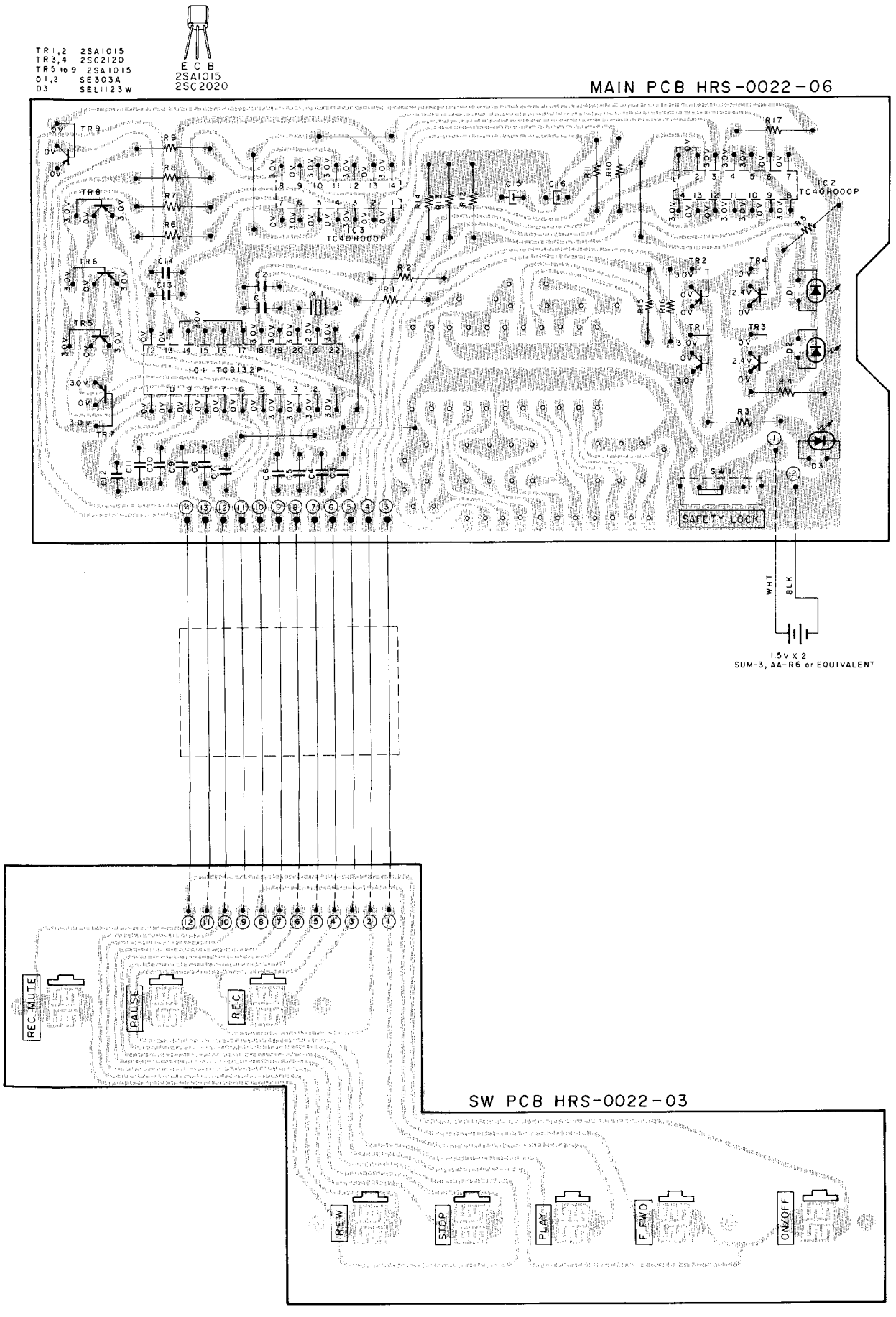
II. CONTROLS



1. TRANSMITTING WINDOW
2. ON/OFF SWITCH
3. FAST FORWARD BUTTON
4. PLAY BUTTON
5. STOP BUTTON
6. REWIND BUTTON
7. RECORDING MUTE BUTTON
8. PAUSE BUTTON
9. RECORDING BUTTON
10. SAFETY LOCK
11. REMOTE CONTROL INDICATOR

Fig. 1 Controls

1. MAIN P.C BOARD HRS-0022-06 and SW P.C BOARD HRS-0022-03



SECTION 3

PARTS LIST

TABLE OF CONTENTS

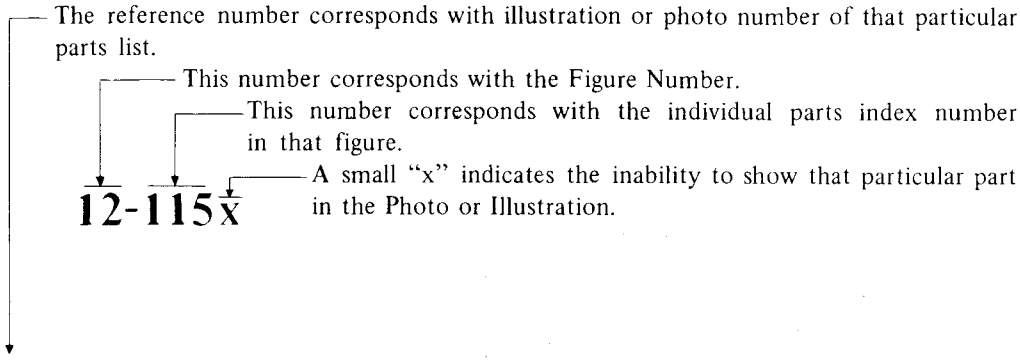
1. RECOMMENDED SPARE PARTS 29
2. REEL TABLE BLOCK 30
3. MECHA BLOCK 32
4. PRE AMP P.C BOARD BLOCK 34
5. SYS. CON. P.C BOARD BLOCK 34
6. OPERATION P.C BOARD BLOCK 35
7. ASSEMBLY BLOCK 36
8. FINAL ASSEMBLY BLOCK 38
9. REMOTE CONTROL UNIT RC-330 38

INDEX 39

Resistor and Capacitor which is not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read List


The reference number corresponds with illustration or photo number of that particular parts list.
This number corresponds with the Figure Number.
This number corresponds with the individual parts index number in that figure.
A small "x" indicates the inability to show that particular part in the Photo or Illustration.
12-115x

Ref. No.	Parts No.	Description
		FLYWHEEL BLOCK #13
12-115x	800425	Flywheel Block Assy. Comp.
12-116	244506	Flywheel Only
12-117x	244754	Felt, Flywheel
12-118	251324	Main Metal Case
12-119	253080	Main Metal

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of Components of the Schematic Diagram or Service Manual.
5. Please utilize separate "Common List for Service Parts" for Resistor Parts orders.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.
   It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

CAUTION:
1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Service Manual (Basic Parts List) may be partially changed, please use this parts list for all future reference.

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

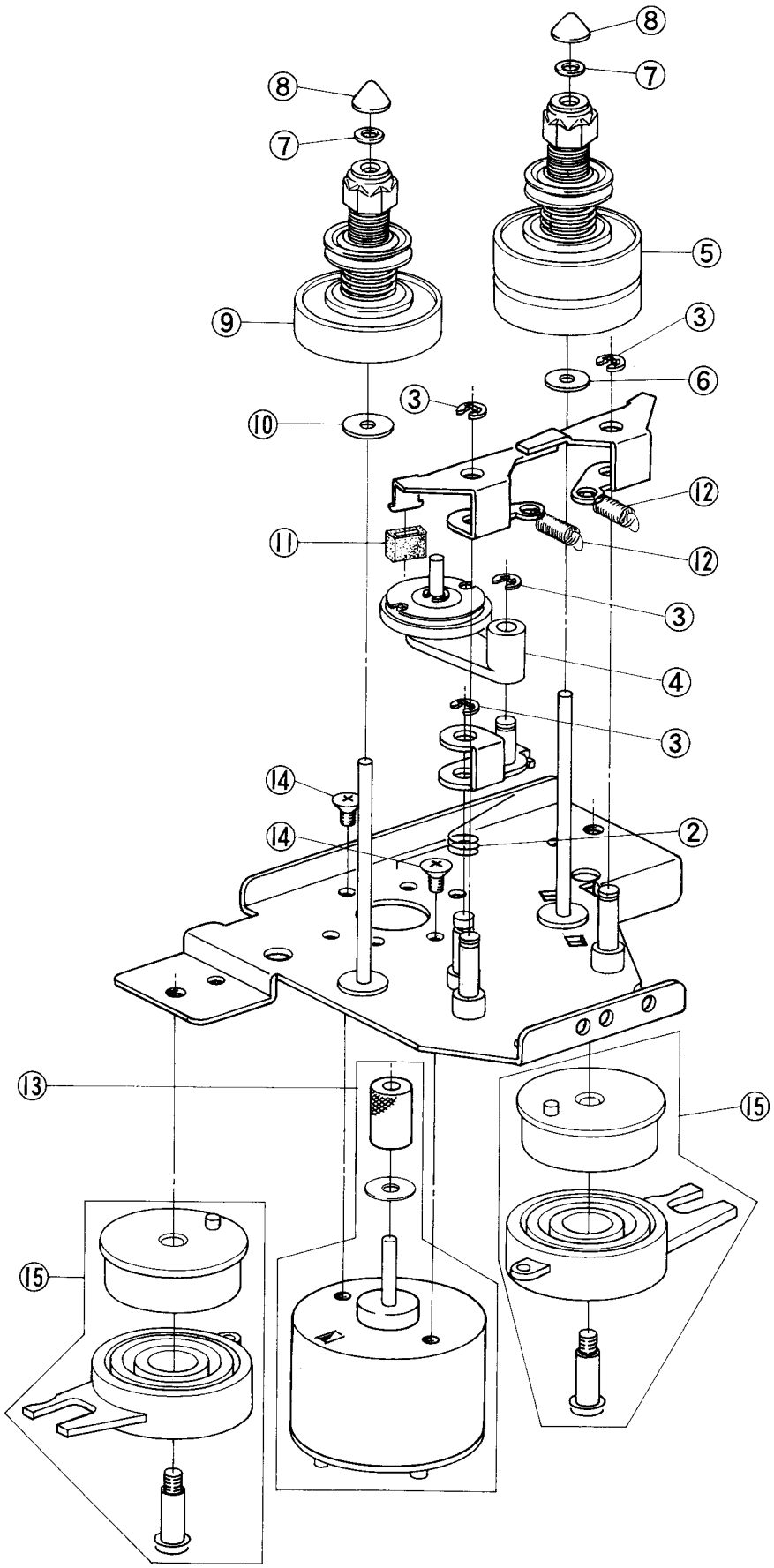
AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

1. RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare parts Items.

REF. NO.	PARTS NO.	DESCRIPTION
1-1	BF330095	FLYWHEEL (C)
1-2	BHT2021A210A	HEAD BLK CS-F330
1-3	BL328427	TAKE-UP IDLER ASSY
1-4	BL328426	WIND IDLER ASSY
1-5	BMT2021A170A	MAIN MOTOR (W/PULLEY) BLK CS-F330
1-6	BMT2016A320A	REEL MOTOR BLK (W/PULLEY) GX-F35
1-7	BRB328517	REEL TABLE PART
1-8	BR328425	SUPPLY REEL TABLE ASSY
1-9	BR328424	TAKE-UP REEL TABLE ASSY
1-10	BT328401	⚠ TRANS POWER CLT-1 (U)
1-11	BT331607	⚠ TRANS POWER CLT-20 (C,A)
1-12	BT328403	⚠ TRANS POWER CLT-3 (E,V)
1-13	BT331608	⚠ TRANS POWER CLT-30 (E,V)
1-14	BT328404	⚠ TRANS POWER CLT-4 (C,A)
1-15	BT331609	⚠ TRANS POWER CLT-40 (B,S)
1-16	BT331605	⚠ TRANS POWER CLT-50 (U)
1-17	BT328405	⚠ TRANS POWER CLT-6 (B,S)
1-18	EC330718	OSC CE CRM455A 0.455MHZ
1-19	ED308952	D GERMA V 1K34A-LR F07
1-20	ED780019	D LED SEL1123W
1-21	ED706226	D LED SE303A INFRARED
1-22	ED322773	D LED SLP-255D-01 GRN
1-23	ED330238	D PHOTO PH302
1-24	ED330319	D SILICON DBA10B 100/1.0A
1-25	ED325766	D SILICON GP30J 600/3.0A
1-26	ED200469	D SILICON H DS448 FA1 F10
1-27	ED330987	D SILICON RB152 200/1.5A
1-28	ED200468	D SILICON V DS448 VB3
1-29	ED306109	D SILICON W03B 100/1.0A
1-30	ED329449	D ZENER H HZ18 3
1-31	ED331617	D ZENER H HZ6 A3
1-32	ED331197	D ZENER H HZ6 C1
1-33	ED321180	D ZENER H HZ9 B2
1-34	ED331185	D ZENER V HZ12 C2
1-35	ED331616	IND LE LT-1017 GRAPH
1-36	EF300588	⚠ FUSE EAWK T 250V 0.20A (F4) (E,B,S,V)
1-37	EF668474	⚠ FUSE SEMKO T 250V 0.40A (F3) (E,B,S,V)
1-38	EF602550	⚠ FUSE SEMKO T 250V 1.25A (F1,2) (E,B,S,V)
1-39	EF308933	⚠ FUSE TSC A 250V 0.20A (F4)(U)
1-40	EF309389	⚠ FUSE TSC A 250V 0.40A (F3)(U)
1-41	EF306949	⚠ FUSE TSC A 250V 1.25A (F1,2) (U)
1-42	EF315334	⚠ FUSE TSC 125V 0.25A (F4)(C,A)
1-43	EF308848	⚠ FUSE TSC 125V 0.40A (F3)(C,A)
1-44	EF309392	⚠ FUSE TSC 125V 1.25A (F1,2) (C,A)
1-45	EI311959	IC HA12028
1-46	EI430661	IC M53200P
1-47	EI330113	IC M54886P
1-48	EI605013	IC NE545B
1-49	EI780017	IC TC40H000P
1-50	EI780016	IC TC9132P
1-51	EI330720	IC TC9134P
1-52	EI330226	IC μPC1373H
1-53	EI780018	OSC CE KBR-445B 455KHZ
1-54	EL330271	PL LEAD 6.3V 100MA
1-55	EP330350	⚠ RELAY POWER G2W-1112P-V 1NO 24V (U,E,B,S,V)
1-56	EP330349	⚠ RELAY POWER G2W-1112P-VUS 1NO 24V (C,A)
1-57	EP328529	RELAY LEAD LAB2NS 2NO 12V
1-58	EP328419	SOLENOID 1240PLT 27V
1-59	EP328420	SOLENOID 1240PLT 27V
1-60	ER328490	FILTER DB D07-001K 19KHZ
1-61	ER328491	FILTER DB D07-003K 100KHZ
1-62	ES310839	⚠ SW PUSH SDG1P-E 01-1 E (U,E,B,S,V)
1-63	ES655806	⚠ SW PUSH SDG1P-J 01-1 C (C)
1-64	ES665875	⚠ SW PUSH SDG1P-J 01-1 UC (A)
1-65	ES328430	SW LEAF BSW-101B 01-1 NO
1-66	ES330335	SW LEVER 00630350 2-06-03N
1-67	ES321274	SW LEVER 63349 2-06-03S
1-68	ES283072	SW SLIDE SSC22LP 2-02-02N
1-69	ES330463	SW SLIDE 00230593 2-02-03S
1-70	ES309311	SW TACT KEG10904
1-71	ET311977	PHOTO SENSOR SPI-201
1-72	ET308867	TR 2SA1015 O,Y,GR
1-73	ET554657	TR 2SA733A P,Q
1-74	ET324134	TR 2SA984K E,F
1-75	ET318237	TR 2SB764 E,F
1-76	ET328438	TR 2SB808-V F,G
1-77	ET375603	TR 2SC1061 B,C
1-78	ET603257	TR 2SC1312S G,H
1-79	ET328844	TR 2SC2120 O,Y
1-80	ET309353	TR 2SC2274 E,F
1-81	ET310833	TR 2SC2274K E
1-82	ET200505	TR 2SC2603 E,F
1-83	ET200985	TR 2SC2603 F,G
1-84	ET328437	TR 2SD1012-V F,G
1-85	ET307349	TR 2SD794 P,Q
1-86	ET201580	TR 2SD894
1-87	EV329416	VR ROTARY 16P11x0R 15A503 15A503
1-88	HE321585	HEAD E HF213151 C
1-89	HP201806	HEAD R/P RP-2442-DM-6210 C
1-90	MB330097	BELT FLYWHEEL
1-91	MB328324	COUNTER BELT
1-92	MLB603756	COUNTER PART
1-93	MLB328513	PINCH ROLLER ARM PART GX-F35
1-94	MPB319580	PINCH ROLLER PART GX-F90

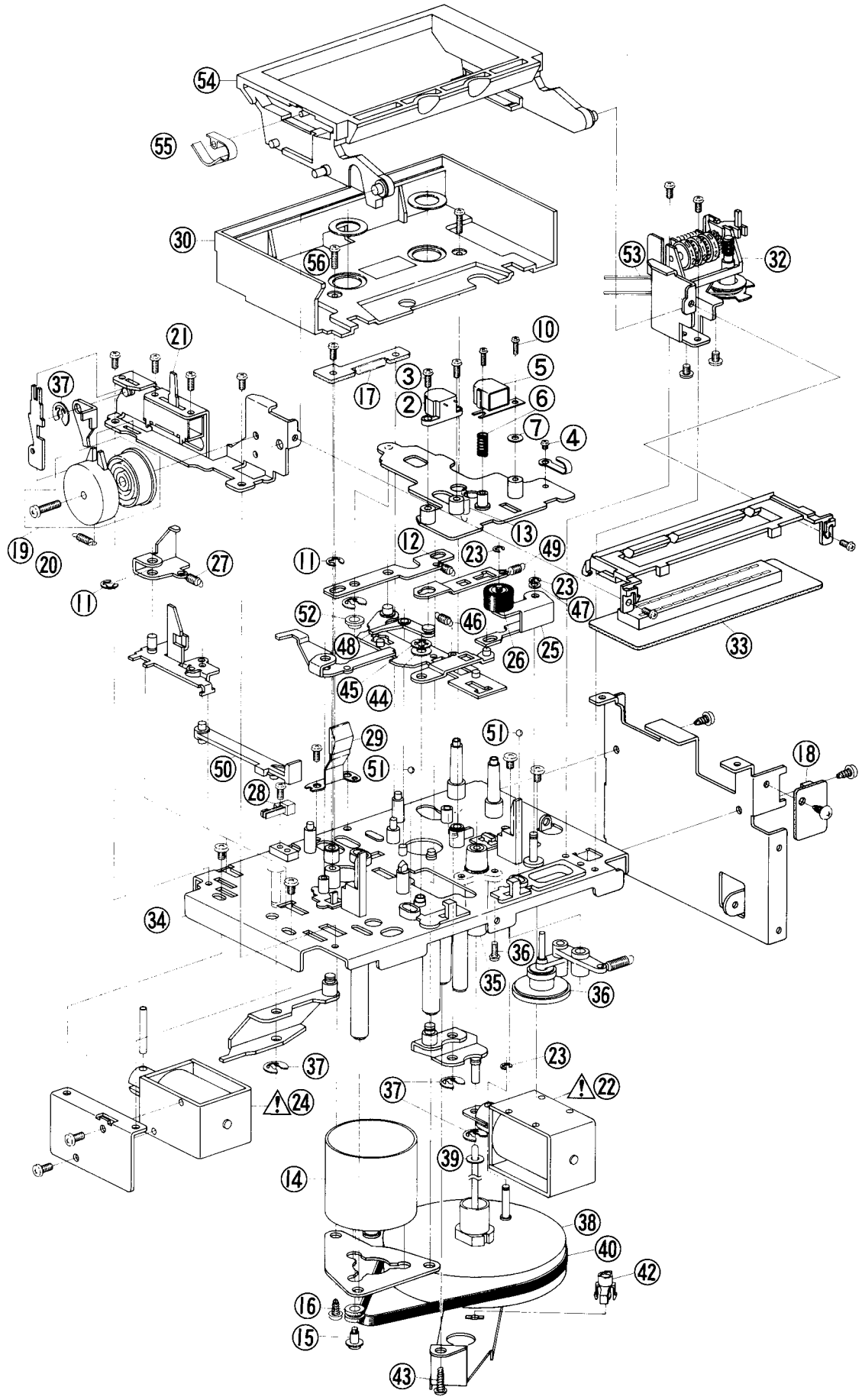
REEL TABLE BLOCK



2. REEL TABLE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BRB328517	REEL TABLE PART
2-2	ZG328361	IDLER SPRING
2-3	ZW270088	RING E 190SUP CMT
2-4	BL328426	WIND IDLER ASSY
2-5	BR328424	TAKE-UP REEL TABLE ASSY
2-6	ZW536466	PW21x070x050NYL
2-7	ZW305546	PW21x040x025PSL
2-8	MT305793	REEL CAP
2-9	BR328425	SUPPLY REEL TABLE ASSY
2-10	ZW201610	PW19.8x080x025PSL
2-11	MB282104	BRAKE RUBBER
2-12	ZG312945	SP T1-3.2/0.29-14.0 T1-061
2-13	BMT2016A320A	REEL MOTOR BLK (W/PULLEY) GX-F35
2-14	ZS430413	CTS26x04STL CMT
2-15	BZT2016A330A	DAMPER (B) ASSY GX-F35

MECHA BLOCK


54
55
30
56
53
32
21
10
37
3
5
17
2
6
7
4
13
19
20
12
23
49
27
11
11
23
47
52
46
48
26
25
33
45
44
29
51
18
50
51
28
34
36
35
36
37
23
37
22
24
39
14
38
40
42
16
15
43

3. MECHA BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
	HEAD BLOCK	
3-1x	BHT2021A210A	HEAD BLK CS-F330
3-2	HE321585	HEAD E HF213151 C
3-3	ZS590804	PAN23x06STL CMT
3-4	ZS303936	PAN20x02STL CMT
3-5	HP201806	HEAD R/P RP-2442-DM-6210 C
3-6	ZG328305	ANGLE SPRING
3-7	ZW300883	PW23x060x010PBR
3-8x	ZW300884	PW23x060x015PBR
3-9x	ZW300885	PW23x060x020PBR
3-10	ZS492816	BID20x06STL CMT
3-11	ZW270101	RING E300SUP CMT
3-12	ZG312946	SP T1-3.2/0.29-16.0 T1-062
3-13	ZG312997	SP T1-4.0/0.4-16.0 T1-111
	MAIN MOTOR BLOCK	
3-14	BMT2021A170A	MAIN MOTOR (W/PULLEY) BLK CS-F330
3-15	ZS321338	MOTOR SCREW
3-16	MB282778	RUBBER BUSH
	LAMP P.C BOARD BLOCK	
3-17	EL200096	PL LEAD 3.5V 100MA
	DETECTOR P.C BOARD BLOCK	
3-18	ET311977	PHOTO SENSOR SPI-201
	HOLDER SW BLOCK	
3-19	BZT2021A200A	DAMPER (A) BLK CS-F330
3-20	ZG329433	EJECT SPRING
	SLIDE SW BLOCK	
3-21	ES330463	SW SLIDE 00230593 2-02-03S
	R PLUNGER BLOCK	
3-22	EP328420	SOLENOID 1240PLT 27V
3-23	ZW270088	RING E 190SUP CMT
	L PLUNGER BLOCK	
3-24	EP328419	SOLENOID 1240PLT 27V
	PINCH ROLLER BLOCK	
3-25	MLB328513	PINCH ROLLER ARM PART GX-F35
3-26	MPB319580	PINCH ROLLER PART GX-F90
	EJECT ASSY	
3-27	ZG312943	SP T1-3.2/0.29-11.2 T1-059
	LEAF SW ASSY	
3-28	ES328430	SW LEAF BSW-101B 01-1 NO
	CASSETTE HOLD PLATE ASSY	
3-29	TCT2016A410A	CASSETTE HOLD PLATE ASSY GX-F35
	LID HOUSING ASSY	
3-30	BZT2016A430A	LID HOUSING ASSY GX-F35
3-31x	BZT2016A430B	LID HOUSING ASSY GX-F35-BL
	COUNTER BLOCK	
3-32	MLB603756	COUNTER PART
	METER BLOCK	
3-33	ED331616	IND LE LT-1017 GRAPH
	MECHA BLOCK	
3-34	TC328423	MECHA FRAME BLK
3-35	MV328322	MAIN CASE
3-36	BL328427	TAKE-UP IDLER ASSY
3-37	ZW290283	RING U 285SUP CMT
3-38	BF330095	FLYWHEEL (C)
3-39	ZW309295	THRUST WASHER
3-40	MB330097	BELT FLYWHEEL
3-41x	ZW694798	PW31x070x020TFL
3-42	TC330099	THRUST HOLDER
3-43	ZS323993	PT BR30x10STL CMT
3-44	ZW259492	PW31x080x030PBR
3-45	ZW329422	RING CS0300
3-46	ZG328352	PINCH ROLLER SPRING
3-47	ZW329448	PW26x045x013PSL
3-48	ML328337	COUPLING LEVER
3-49	ZG324329	SP T2-3.2/0.29-11.2 T2-059
3-50	TC328344	EJECT JOINT
3-51	MV368886	BALL 300STL
3-52	TC328348	GUIDE COLLAR
3-53	MB328324	COUNTER BELT
3-54	TC328351	CASSETTE HOLDER (BL)
3-55	ZG321487	MOLD SPRING
3-56	ZS329443	PLX PAN26x08STL BNI

4. PRE AMP P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
4-1	BAT2021A060A	PC PRE AMP BLK CS-F330(U) (U,C,A)
4-2	BAT2021A060B	PC PRE AMP BLK CS-F330(E) (E,B,S,V)
4-3	BAT2021A060C	PC PRE AMP BLK CS-F330TBL U (U,C,A)
4-4	BAT2021A060D	PC PRE AMP BLK CS-F330TBL E (E,B,S,V)
4-IC1	EI311959	IC HA12028
4-IC2	EI605013	IC NE545B
4-TR1	ET200505	TR 2SC2603 E,F
4-TR2,3	ET603257	TR 2SC1312S G,H
4-TR4	ET200505	TR 2SC2603 E,F
4-TR5	ET328437	TR 2SD1012-V F,G
4-TR6	ET603257	TR 2SC1312S G,H
4-TR7	ET200505	TR 2SC2603 E,F
4-TR8	ET318237	TR 2SB764 E,F
4-TR9to20	ET200505	TR 2SC2603 E,F
4-TR21,22	ET310833	TR 2SC2274K E
4-D1	ED308952	D GERMA V 1K34A-LR F07
4-D2to17	ED200468	D SILICON V DS448 VB3
4-D18,19	ED308952	D GERMA V 1K34A-LR F07
4-J1	EJ331613	PHONE J HLJ0346-210 3P, 2x2P (CS-F330)
4-J1	EJ332109	PHONE J HLJ0346-010 2x3P (CS-F330TBL)
4-J2	EJ331614	PHONE J 3P HLJ0316-23 6.3 (CS-F330)
4-J2	EJ332110	PHONE J 3P HLJ0316-020 6.3 (CS-F330TBL)
4-J3	EJ308986	PIN J 1784P1782 P 4P (U,C,A)
4-J3	EJ308985	JACK PLATE DIN, PIN JACK 4P (E,B,S,V)
4-SW1	ES321274	SW LEVER 63349 2-06-03S
4-SW2	ES330335	SW LEVER 00630350 2-06-03N
4-SW3	ES283072	SW SLIDE SSC22LP 2-02-02N (E,B,S,V)
4-VR1	EV315413	R S-FIX H D8 3P 503
4-VR2	EV315414	R S-FIX H D8 3P 203
4-VR3	EV329416	VR ROTARY 16P11x0R 15A503 15A503
4-VR4	EV315752	R S-FIX H D8 3P 204
4-VR5	EV322416	R S-FIX H D8 3P 303
4-VR6	EV314968	R S-FIX H D10 3P 104
4-VR7	EV315414	R S-FIX H D8 3P 203
4-RL1	EP328529	RELAY LEAD LAB2NS 2NO 12V
4-VL1	EO330237	COIL VARI 1 FE003 15MH
4-L1	EO349560	COIL FIX 1 FL09H 1.2MH J
4-T1	EO331610	COIL OSC 1 2330-892-063 100KHZ
4-FL1	ER328490	FILTER DB D07-001K 19KHZ
4-FL2	ER328491	FILTER DB D07-003K 100KHZ
4-FL3,4	EO315758	COIL TUN 1 100S-431 100KHZ
4-FR1	ER328519	⚠ R FUSE ERD2FC F10 1/4W 68R0G
4-C1	EC306988	C STY V F05 500 331J 50DC
4-C3	EC306987	C STY V F05 500 471J 50DC
4-C6	EC309416	C STY V F05 500 201J 50DC
4-C14	EC306438	C STY V F05 500 101J 50DC
4-C39	EC306419	C STY V F05 500 681J 50DC
4-C51	EC306438	C STY V F05 500 101J 50DC
4-C75	EC321349	C PP V F10 PFH 222J 630DC
4-5	ZW263946	RV NYL40x050

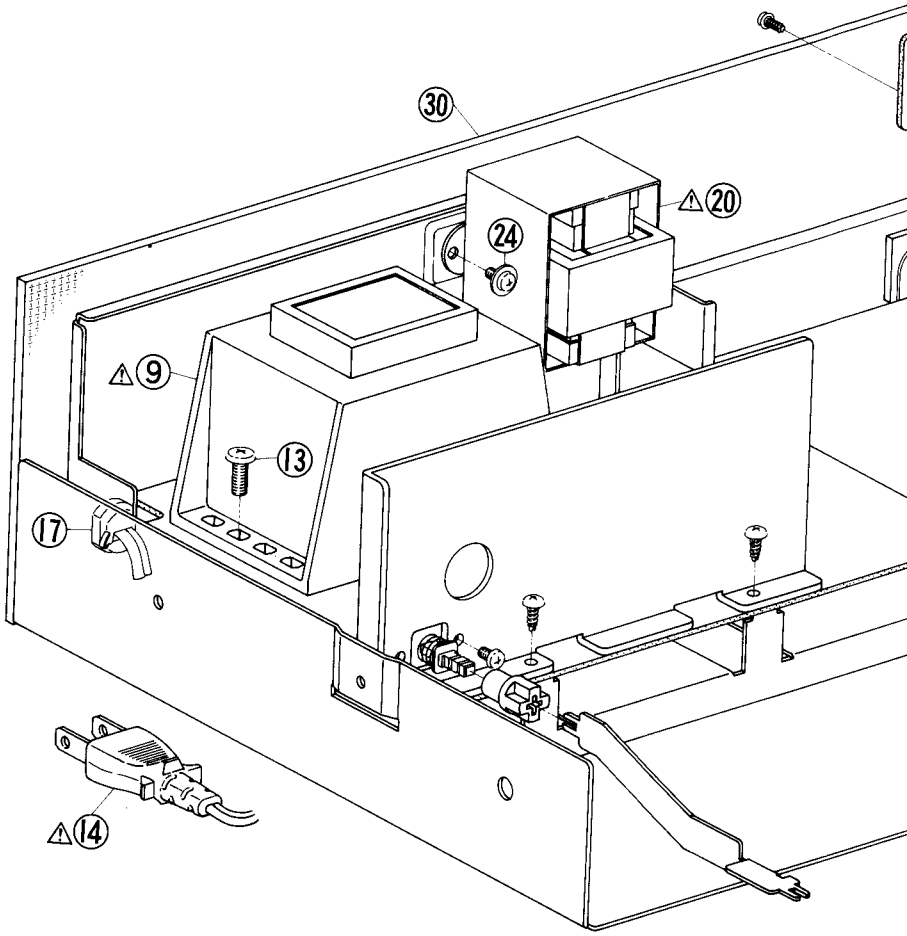
5. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
5-1	BAT2021A100A	PC SYSCON BLK CS-F330(U)
5-2	BAT2021A100B	PC SYSCON BLK CS-F330(C)
5-3	BAT2021A100C	PC SYSCON BLK CS-F330(A)
5-4	BAT2021A100D	PC SYSCON BLK CS-F330(E)
5-5	BAT2021A100E	PC SYSCON BLK CS-F330(B) (B,S,V)
5-IC1	EI330113	IC M54886P
5-IC2	EI430661	IC M53200P
5-IC3	EI330720	IC TC9134P
5-IC4	EI330226	IC μPC1373H
5-TR1	ET201580	TR 2SD894
5-TR2	ET375603	TR 2SC1061 B,C
5-TR3,4	ET200985	TR 2SC2603 F,G
5-TR5	ET554657	TR 2SA733A P,Q
5-TR6to9	ET200985	TR 2SC2603 F,G
5-TR10	ET307349	⚠ TR 2SD794 P,Q
5-TR11	ET200985	⚠ TR 2SC2603 F,G
5-TR12to14	ET200985	TR 2SC2603 F,G
5-TR17	ET309353	TR 2SC2274 E,F
5-TR18	ET328438	TR 2SB808-V F,G
5-TR19	ET200985	TR 2SC2603 F,G
5-TR20,21	ET328437	TR 2SD1012-V F,G
5-TR22,23	ET328438	TR 2SB808-V F,G
5-TR24	ET554657	TR 2SA733A P,Q
5-TR25	ET200985	TR 2SC2603 F,G
5-TR26	ET309353	TR 2SC2274 E,F
5-TR27	ET324134	TR 2SA984K E,F
5-TR28	ET200985	TR 2SC2603 F,G
5-TR29	ET309353	TR 2SC2274 E,F
5-R30	ET324134	TR 2SA984K E,F
5-TR31,32	ET200985	TR 2SC2603 F,G
5-TR33to35	ET554657	TR 2SA733A P,Q
5-TR37	ET200985	TR 2SC2603 F,G
5-TR38	ET201580	⚠ TR 2SD894
5-D1	ED330319	⚠ D SILICON DBA10B 100/1.0A
5-D2,3	ED330987	⚠ D SILICON RB152 200/1.5A
5-D4	ED306109	⚠ D SILICON W03B 100/1.0A
5-D5	ED200468	D SILICON V DS448 VB3
5-D6	ED325766	⚠ D SILICON GP30J 600/3.0A
5-D7	ED331617	D ZENER H HZ6 A3
5-D8	ED329449	D ZENER H HZ18 3
5-D9to17	ED200468	D SILICON V DS448 VB3
5-D18	ED321180	D ZENER H HZ9 B2
5-D19	ED306109	D SILICON W03B 100/1.0A
5-D20,21	ED200468	D SILICON V DS448 VB3
5-D24	ED200468	D SILICON V DS448 VB3
5-D25	ED306109	D SILICON W03B 100/1.0A
5-D26to28	ED200468	D SILICON V DS448 VB3
5-D29,30	ED306109	D SILICON W03B 100/1.0A
5-D32	ED200468	D SILICON V DS448 VB3
5-D33,34	ED306109	D SILICON W03B 100/1.0A
5-D36to42	ED200468	D SILICON V DS448 VB3
5-D43	ED331197	D ZENER H HZ6 C1
5-D44	ED331185	D ZENER V HZ12 C2
5-SW1	ES310839	⚠ SW PUSH SDG1P-E 01-1 E (U,E,B,S,V)
5-SW1	ES655806	⚠ SW PUSH SDG1P-J 01-1 C (C)
5-SW1	ES665875	⚠ SW PUSH SDG1P-J 01-1 UC (A)
5-RL1	EP330350	⚠ RELAY POWER G2W-1112P-V 1NO 24V (U,E,B,S,V)
5-RL1	EP330349	⚠ RELAY POWER G2W-1112P-VUS 1NO 24V (C,A)
5-L1	ER328491	FILTER DB D07-003K 100KHZ
5-L2	EO321336	COIL VARI 1 FE002 10MH
5-VS1,2	MZ283140	⚠ SOCKET SELECTER X-I7238 6P (U)
5-X1	EC330718	OSC CE CRM455A 0.455MHZ
5-FR1	ER330587	⚠ R FUSE ERQ14AJ 1/4W 330J
5-R103	ER331618	⚠ R OMF H SNP FS 1W 561J
5-C1	EC327382	⚠ C MP V 472M 250AC (U)
5-C1	EC314688	⚠ C CE V FZ 103P 125AC (C)
5-C1	EC320548	⚠ C CE V F 103Z 250AC (A)
5-C1	EC330307	⚠ C MMY V ECQUF 472M 250AC (E,B,S,V)

REF. NO.	PARTS NO.	DESCRIPTION
5-C2	EC320548	⚠ C CE V F 103Z 250AC (U)
5-C2	EC314688	⚠ C CE V FZ 103P 125AC (C)
5-C2	EC320548	⚠ C CE V F 103Z 250AC (A)
5-C2	EC327382	⚠ C MP V 472M 250AC (E,B,S,V)
5-C43	EC318357	C STY V F05 500 561J 50DC

6. OPERATION P.C BOARD BLOCK

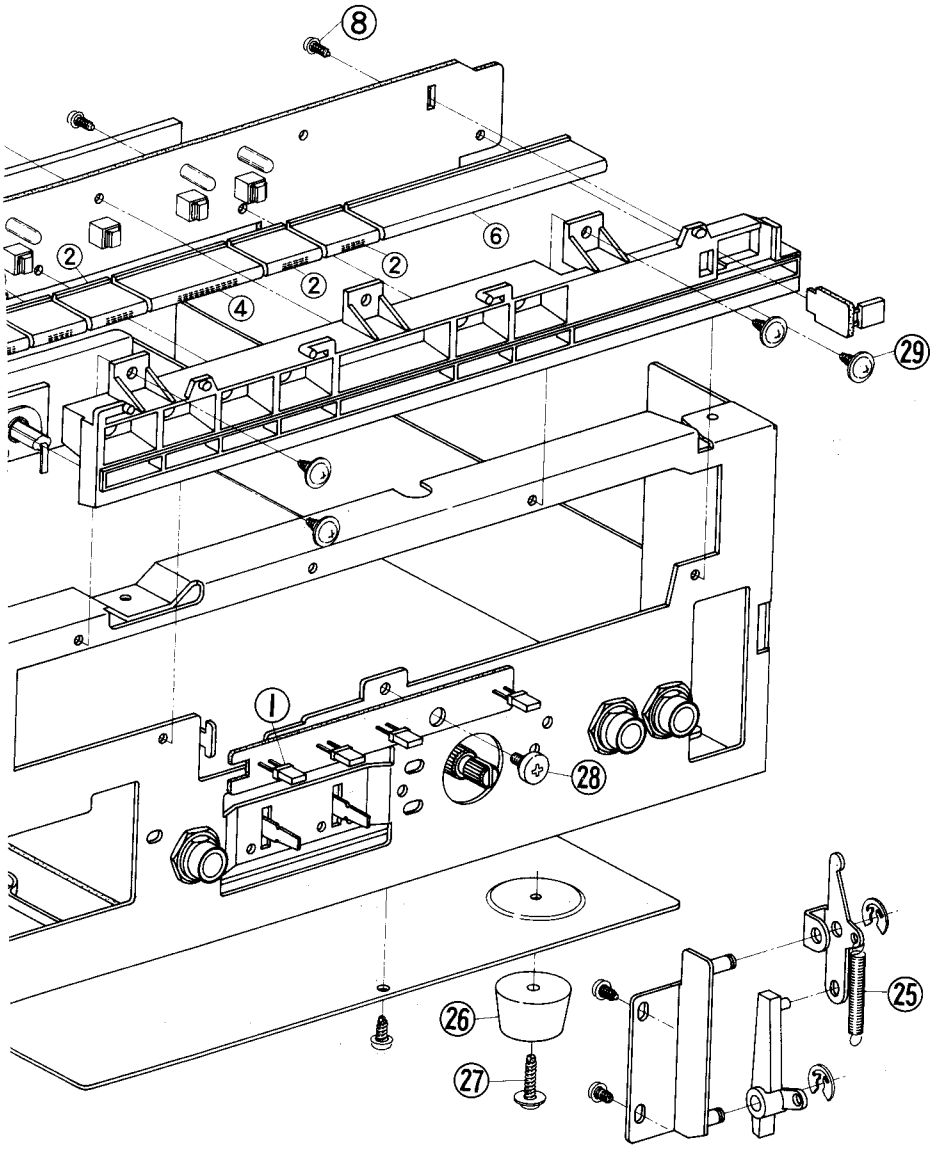
REF. NO.	PARTS NO.	DESCRIPTION
6-TR1	ET328438	TR 2SB808-V F,G
6-TR2	ET200985	TR 2SC2603 F,G
6-TR3to6	ET328438	TR 2SB808-V F,G
6-D1	ED322773	D LED SLP-255D-01 GRN
6-D3	ED200469	D SILICON H DS448 FA1 F10
6-SW1to7	ES309311	SW TACT KEG10904
6-IN1to6	EL330271	PL LEAD 6.3V 100MA
6-D1	ED330238	D PHOTO PH302



7. ASSEMBLY BLOCK

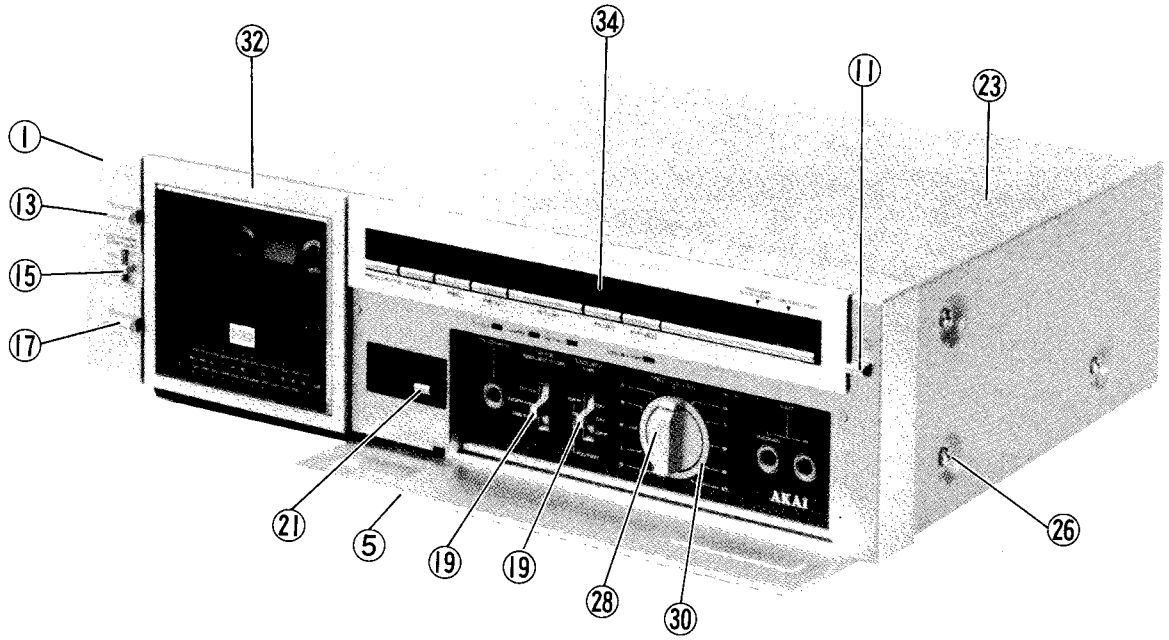
REF. NO.	PARTS NO.	DESCRIPTION
	LED P.C BOARD BLOCK	
7-1	ED322773	D LED SLP-255D-01 GRN
	OPERATION BLOCK	
7-2	SK330748A	KNOB PUSH (A)
7-3x	SK330748C	KNOB PUSH (A)-BL
7-4	SK330803A	KNOB PUSH (A)
7-5x	SK330803B	KNOB PUSH (A)-BL
7-6	SK331800A	KNOB DUMMY
7-7x	SK331800B	KNOB DUMMY (BL)
7-8	ZS329495	PLX PAN26x06STL CMT
	POWER SUPPLY BLOCK	
7-9	BT328401	⚠ TRANS POWER CLT-1 (U)
7-10x	BT328404	⚠ TRANS POWER CLT-4 (C,A)
7-11x	BT328403	⚠ TRANS POWER CLT-3 (E,V)
7-12x	BT328405	⚠ TRANS POWER CLT-6 (B,S)
7-13	ZS314702	ST BID40x10STL CMT

REF. NO.	PARTS NO.	DESCRIPTION
7-14	EW306428	⚠ AC CORD 2 CORES KP-205A, VFF UCJ (U)
7-15x	EW305691	⚠ AC CORD 2 CORES KP-8, SPT-1 UC (C,A)
7-16x	EW313882	⚠ AC CORD 2 CORES KP-419C, LTCE-2F E (E)
7-17	SZ631945	STRAIN RELIEF SR-4N-4 (U,C,A,E)
7-18x	EJ310567	⚠ SOCKET INLET 0378PC-GS E 2P (B,S,V)
7-19x	ZS308895	ST PAN30x08STL CMT (B,S,V)
7-20	BT331605	⚠ TRANS POWER CLT-50 (U)
7-21x	BT331607	⚠ TRANS POWER CLT-20 (C,A)
7-22x	BT331608	⚠ TRANS POWER CLT-30 (E,V)
7-23x	BT331609	⚠ TRANS POWER CLT-40 (B,S)
7-24	ZS331871	ST BID30x06STL CMT PW080
7-25	ZG312400	SP T1-4.0/0.4-31.5 T1-117
	ASSEMBLY BLOCK	
7-26	SA331901	FOOT RUBBER



REF. NO.	PARTS NO.	DESCRIPTION
7-27	ZS308513	T2BR30x12STL CMT PW080
7-28	ZS329460	GRADUATED SCREW
7-29	ZS498273	T2BR30x08STL CMT PW080
7-30	SP331865A	PANEL REAR BOARD CS-F330(U) AS
7-31x	SP331865C	PANEL REAR BOARD CS-F330(C) AS
7-32x	SP331865D	PANEL REAR BOARD CS-F330(A) AS
7-33x	SP331865E	PANEL REAR BOARD CS-F330(E) AS
7-34x	SP331865F	PANEL REAR BOARD CS-F330(B,S) AS
7-35x	SP331865G	PANEL REAR BOARD CS-F330(V) AS
7-36x	ZS225134	T2PAN30x10STL CMT PW080
7-37x	ZW305013	RV POP32
7-38x	EF306949	⚠ FUSE TSC A 250V 1.25A (F1,2) (U)
7-39x	EF309389	⚠ FUSE TSC A 250V 0.40A(F3)(U)
7-40x	EF308933	⚠ FUSE TSC A 250V 0.20A(F4)(U)
7-41x	EF309392	⚠ FUSE TSC 125V 1.25A (F1,2) (C,A)
7-42x	EF308848	⚠ FUSE TSC 125V 0.40A(F3)(C,A)
7-43x	EF315334	⚠ FUSE TSC 125V 0.25A(F4)(C,A)
7-44x	EF602550	⚠ FUSE SEMKO T 250V 1.25A (F1,2) (E,B,S,V)
7-45x	EF668474	⚠ FUSE SEMKO T 250V 0.40A (F3) (E,B,S,V)
7-46x	EF300588	⚠ FUSE EAWK T 250V 0.20A (F4) (E,B,S,V)
7-47x	EW322400	⚠ AC CORD 2 CORES GTBS-2F/KS-15 B (B)
7-48x	EW322401	⚠ AC CORD 2 CORES KP-560/S-15 S (S)
7-49x	EW315767	⚠ AC CORD 2 CORES KP-419C/KS-15 E (V)

FINAL ASSEMBLY BLOCK



8. FINAL ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
	FRONT PANEL BLOCK	
8-1	BDT2021A130A	PANEL FRONT BLK CS-F330(U) (U,C,A)
8-2x	BDT2021A130B	PANEL FRONT BLK CS-F330(E) (E,B,S,V)
8-3x	BDT2021A130C	PANEL FRONT BLK CS-F330TBL(U) (U,C,A)
8-4x	BDT2021A130D	PANEL FRONT BLK CS-F330TBL(E) (E,B,S,V)
8-5	SPB331792A	PANEL DOOR PART
8-6x	SPB331792B	PANEL DOOR (BL) PART
8-7x	TAA2009A190A	HINGE (L) BLK AM-U330T
8-8x	BZA2009A190B	HINGE (L) BLK CS-F330T-BL
8-9x	TAA2009A200A	HINGE (R) BLK AM-U330T
8-10x	BZA2009A200B	HINGE (R) BLK CS-F330T-BL
8-11	SK330752A	KNOB DOOR
8-12x	SK330752B	KNOB DOOR (BL)
	FINAL ASSEMBLY BLOCK	
8-13	SK331795A	KNOB EJECT
8-14x	SK331795B	KNOB EJECT (BL)
8-15	SK331796A	KNOB SLIDE
8-16x	SK331796B	KNOB SLIDE (BL)
8-17	SK331797A	KNOB POWER
8-18x	SK331797B	KNOB POWER (BL)
8-19	SK331877	LEVER KNOB (D)
8-20x	SK329034	LEVER KNOB (BL)
8-21	SK331767A	KNOB COUNTER
8-22x	SK331767B	KNOB COUNTER (BL)
8-23	BC331866A	COVER UPPER (A)
8-24x	BC331866B	COVER UPPER (A)-BL
8-25x	BC331866C	COVER UPPER (B)
8-26	ZS315878	XST BID40x08STL NI3
8-27x	ZS310588	XST BID40x08STL BNI
8-28	SK331798A	KNOB DOUBLE (UPPER)
8-29x	SK331798B	KNOB DOUBLE (UPPER)-BL
8-30	SK331799A	KNOB DOUBLE (LOWER)
8-31x	SK331799B	KNOB DOUBLE (LOWER)-BL
8-32	BDB604279	LID PART
8-33x	BDB604280	LID (BL) PART
8-34	SZ331794	WINDOW OPERATION
8-35x	SC331860	COVER METER

9. REMOTE CONTROL UNIT RC-330

REF. NO.	PARTS NO.	DESCRIPTION
9-1	AX331621	REMOTE CONTROL UNIT RC-330
9-IC1	EI780016	IC TC9132P
9-IC2,3	EI780017	IC TC40H000P
9-TR1,2	ET308867	TR 2SA1015 O,Y,GR
9-TR3,4	ET328844	TR 2SC2120 O,Y
9-TR5to9	ET308867	TR 2SA1015 O,Y,GR
9-D1,2	ED706226	D LED SE303A INFRARED
9-D3	ED780019	D LED SEL1123W
9-X1	EI780018	OSC CE KBR-445B 455KHZ
9-SW1	ES780015	SW SLIDE

When ordering parts, please quote Parts Number, Description and Model Number.

INDEX

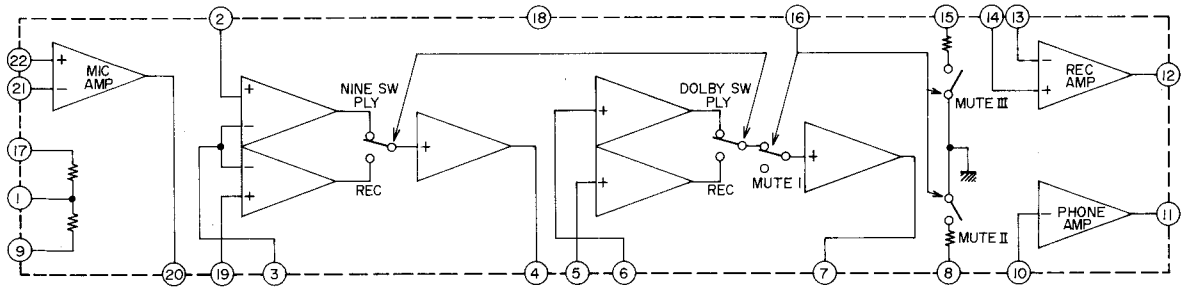
PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
AX331621	9-1	ED330238	6-D1	ET308867	9-TR5to9	SP331865G	7-35x
BAT2021A060A	4-1	ED330319	5-D1	ET309353	5-TR17	SZ331794	8-34
BAT2021A060B	4-2	ED330987	5-D2,3	ET309353	5-TR26	SZ631945	7-17
BAT2021A060C	4-3	ED331185	5-D44	ET309353	5-TR29	TAA2009A190A	8-7x
BAT2021A060D	4-4	ED331197	5-D43	ET310833	4-TR21,22	TAA2009A200A	8-9x
BAT2021A100A	5-1	ED331616	3-33	ET311977	3-18	TCT2016A410A	3-29
BAT2021A100B	5-2	ED331617	5-D7	ET318237	4-TR8	TC328344	3-50
BAT2021A100C	5-3	ED706226	9-D1,2	ET324134	5-TR27	TC328348	3-52
BAT2021A100D	5-4	ED780019	9-D3	ET324134	5-TR30	TC328351	3-54
BAT2021A100E	5-5	EF300588	7-46x	ET328437	4-TR5	TC328423	3-34
BC331866A	8-23	EF306949	7-38x	ET328437	5-TR20,21	TC330099	3-42
BC331866B	8-24x	EF308848	7-42x	ET328438	5-TR18	ZG312400	7-25
BC331866C	8-25x	EF308933	7-40x	ET328438	5-TR22,23	ZG312943	3-27
BDB604279	8-32	EF309389	7-39x	ET328438	6-TR1	ZG312945	2-12
BDB604280	8-33x	EF309392	7-41x	ET328438	6-TR3to6	ZG312946	3-12
BDT2021A130A	8-1	EF315334	7-43x	ET328844	9-TR3,4	ZG312997	3-13
BDT2021A130B	8-2x	EF602550	7-44x	ET375603	5-TR2	ZG321487	3-55
BDT2021A130C	8-3x	EF668474	7-45x	ET554657	5-TR5	ZG324329	3-49
BDT2021A130D	8-4x	EI311959	4-IC1	ET554657	5-TR24	ZG328305	3-6
BF330095	3-38	EI330113	5-IC1	ET554657	5-TR33to35	ZG328352	3-46
BHT2021A210A	3-1x	EI330226	5-IC4	ET603257	4-TR2,3	ZG328361	2-2
BL328426	2-4	EI330720	5-IC3	ET603257	4-TR6	ZG329433	3-20
BL328427	3-36	EI430661	5-IC2	EV314968	4-VR6	ZS225134	7-36x
BMT2016A320A	2-13	EI605013	4-IC2	EV315413	4-VR1	ZS303936	3-4
BMT2021A170A	3-14	EI780016	9-IC1	EV315414	4-VR2	ZS308513	7-27
BRB328517	2-1x	EI780017	9-IC2,3	EV315414	4-VR7	ZS308895	7-19x
BR328424	2-5	EI780018	9-X1	EV315752	4-VR4	ZS310588	8-27x
BR328425	2-9	EJ308985	4-J3	EV322416	4-VR5	ZS314702	7-13
BT328401	7-9	EJ308986	4-J3	EV329416	4-VR3	ZS315878	8-26
BT328403	7-11x	EJ310567	7-18x	EW305691	7-15x	ZS321338	3-15
BT328404	7-10x	EJ331613	4-J1	EW306428	7-14	ZS323993	3-43
BT328405	7-12x	EJ331614	4-J2	EW313882	7-16x	ZS329443	3-56
BT331605	7-20	EJ332109	4-J1	EW315767	7-49x	ZS329460	7-28
BT331607	7-21x	EJ332110	4-J2	EW322400	7-47x	ZS329495	7-8
BT331608	7-22x	EL200096	3-17	EW322401	7-48x	ZS331871	7-24
BT331609	7-23x	EL330271	6-IN1to6	HE321585	3-2	ZS430413	2-14
BZA2009A190B	8-8x	EO315758	4-FL3,4	HP201806	3-5	ZS492816	3-10
BZA2009A200B	8-10x	EO321336	5-L2	MB282104	2-11	ZS498273	7-29
BZT2016A330A	2-15	EO330237	4-VL1	MB282778	3-16	ZS590804	3-3
BZT2016A430A	3-30	EO331610	4-T1	MB328324	3-53	ZW201610	2-10
BZT2016A430B	3-31x	EO349560	4-L1	MB330097	3-40	ZW259492	3-44
BZT2021A200A	3-19	EP328419	3-24	MLB328513	3-25	ZW263946	4-5
EC306419	4-C39	EP328420	3-22	MLB603756	3-32	ZW270088	2-3
EC306438	4-C14	EP328529	4-RL1	ML328337	3-48	ZW270088	3-23
EC306438	4-C51	EP330349	5-RL1	MPB319580	3-26	ZW270101	3-11
EC306987	4-C3	EP330350	5-RL1	MT305793	2-8	ZW290283	3-37
EC306988	4-C1	ER328490	4-FL1	MV328322	3-35	ZW300883	3-7
EC309416	4-C6	ER328491	4-FL2	MV368886	3-51	ZW300884	3-8x
EC314688	5-C1	ER328491	5-L1	MZ283140	5-VS1,2	ZW300885	3-9x
EC314688	5-C2	ER328519	4-FR1	SA331901	7-26	ZW305013	7-37x
EC318357	5-C43	ER330587	5-FR1	SC331860	8-35x	ZW305546	2-7
EC320548	5-C1	ER331618	5-R103	SK329034	8-20x	ZW309295	3-39
EC320548	5-C2	ES283072	4-SW3	SK330748A	7-2	ZW329422	3-45
EC320548	5-C2	ES309311	6-SW1to7	SK330748C	7-3x	ZW329448	3-47
EC321349	4-C75	ES310839	5-SW1	SK330752A	8-11	ZW536466	2-6
EC327382	5-C1	ES321274	4-SW1	SK330752B	8-12x	ZW694798	3-41x
EC327382	5-C2	ES328430	3-28	SK330803A	7-4		
EC330307	5-C1	ES330335	4-SW2	SK330803B	7-5x		
EC330718	5-X1	ES330463	3-21	SK331767A	8-21		
ED200468	4-D2to17	ES655806	5-SW1	SK331767B	8-22x		
ED200468	5-D5	ES665875	5-SW1	SK331795A	8-13		
ED200468	5-D9to17	ES780015	9-SW1	SK331795B	8-14x		
ED200468	5-D20,21	ET200505	4-TR9to20	SK331796A	8-15		
ED200468	5-D24	ET200505	4-TR1	SK331796B	8-16x		
ED200468	5-D26to28	ET200505	4-TR4	SK331797A	8-17		
ED200468	5-D32	ET200505	4-TR7	SK331797B	8-18x		
ED200468	5-D36to42	ET200985	5-TR3,4	SK331798A	8-28		
ED200469	6-D3	ET200985	5-TR6to9	SK331798B	8-29x		
ED306109	5-D4	ET200985	5-TR11	SK331799A	8-30		
ED306109	5-D19	ET200985	5-TR12to14	SK331799B	8-31x		
ED306109	5-D25	ET200985	5-TR19	SL331800A	7-6		
ED306109	5-D29,30	ET200985	5-TR25	SK331800B	7-7x		
ED306109	5-D33,34	ET200985	5-TR28	SK331877	8-19		
ED308952	4-D1	ET200985	5-TR31,32	SPB331792A	8-5		
ED308952	4-D18,19	ET200985	5-TR37	SPB331792B	8-6x		
ED321180	5-D18	ET200985	6-TR2	SP331865A	7-30		
ED322773	6-D1	ET201580	5-TR1	SP331865C	7-31x		
ED322773	7-1	ET201580	5-TR38	SP331865D	7-32x		
ED325766	5-D6	ET307349	5-TR10	SP331865E	7-33x		
ED329449	5-D8	ET308867	9-TR1,2	SP331865F	7-34x		

SECTION 4

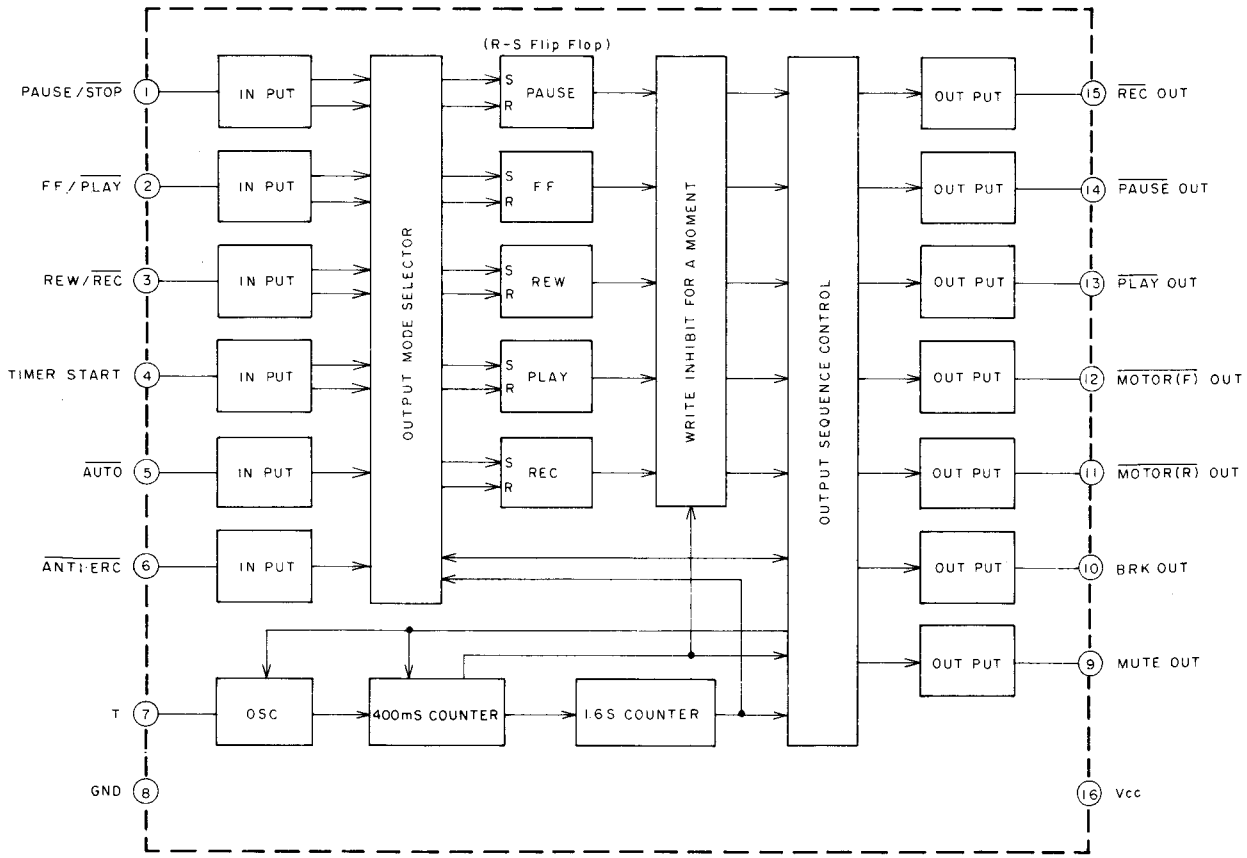
SCHEMATIC DIAGRAM

1. SCHEMATIC DIAGRAM OF ICs
2. CS-F330/T SYSCON
   RC-330 REMOCON NO. 2-1 1621844A SCHEMATIC DIAGRAM
3. CS-F330/T AMP NO. 2-2 1821845A SCHEMATIC DIAGRAM

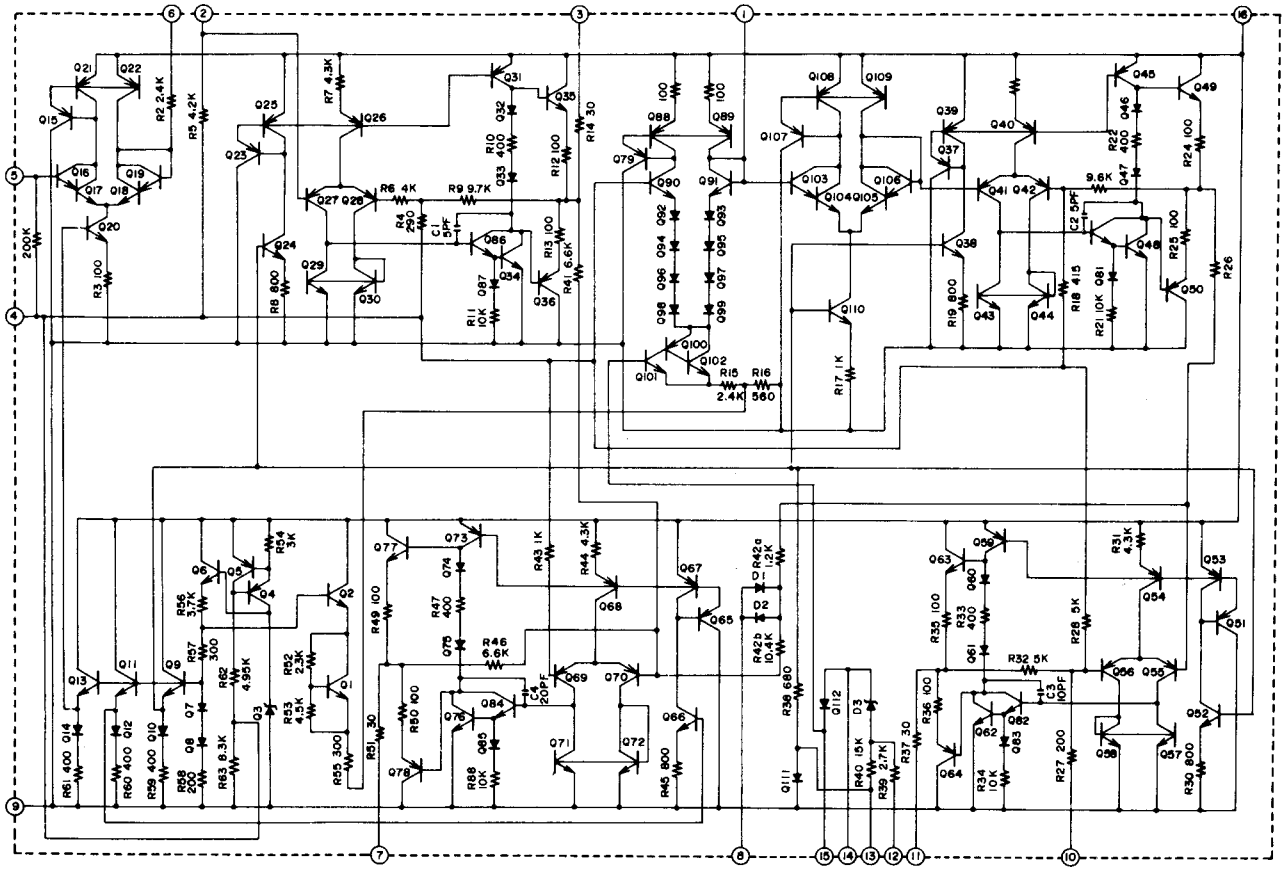
HA12028



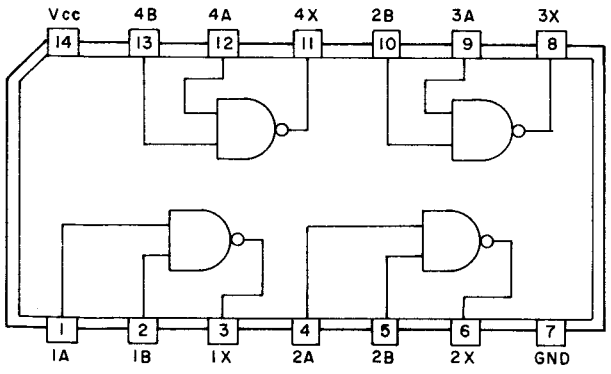
M54886P

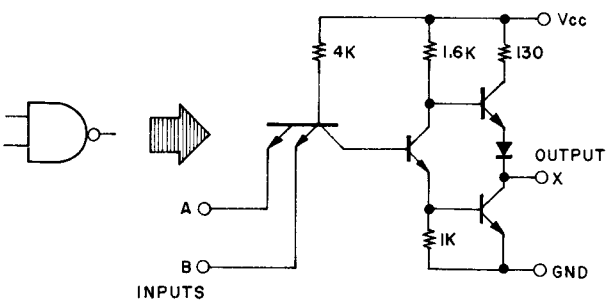


NE545B

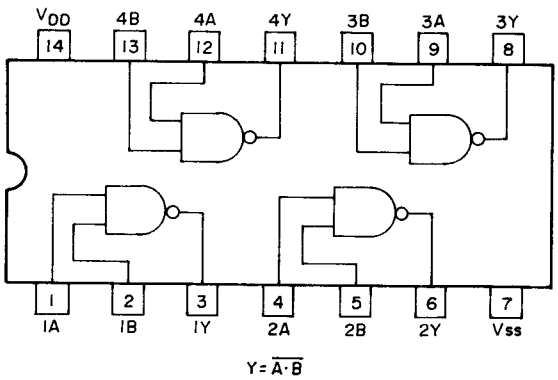


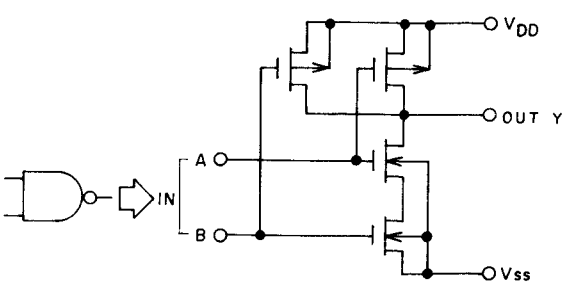
M53200P



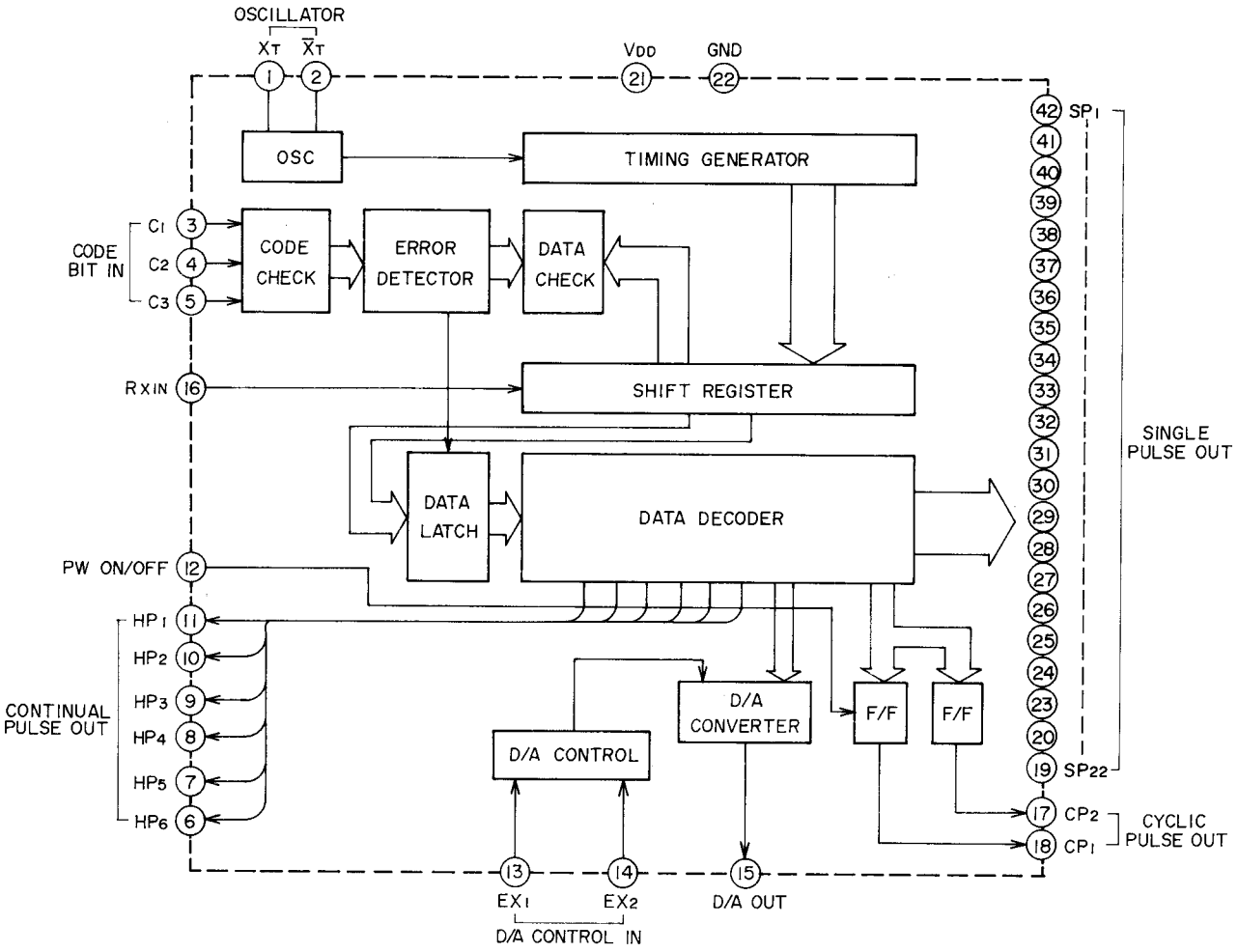


TC40H000P

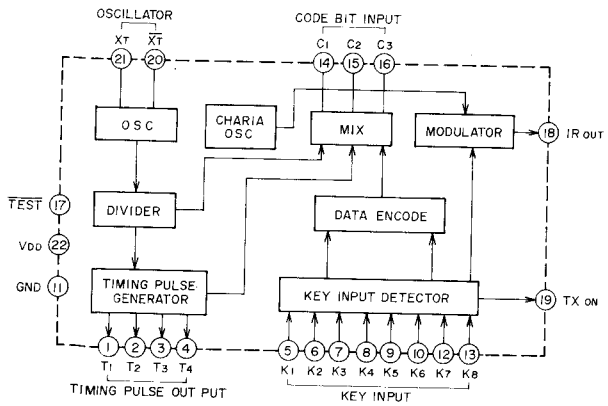




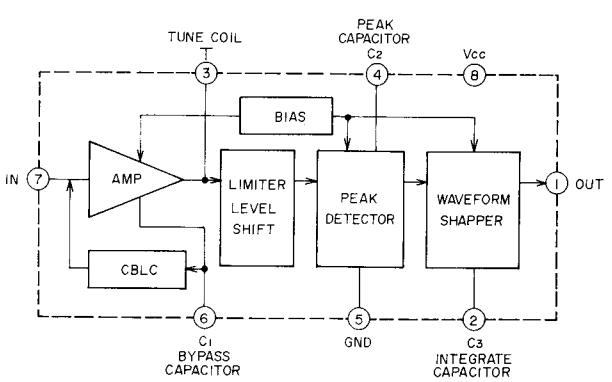
TC9134P



TC9132P



μPC1373H



CS-F330/T, RC-330

CS-F330/T SYSCON
RC-330 REMOCON
SCHEMATIC DIAGRAM
NO. 2-1 1621844A

MAIN PCB HRS-0022-06

SW PCB HRS-0022-03

RC-330 REMOCON

PHOTO LED PCB
(U)T2021B502C
(C,A)T2021B504C
(B,E,S,V)T2021B505C

FILTER PCB
CL-5026

OPERATION PCB
T2021B5060

LAMP PCB
CL-5009

SYSCON PCB
(C,A)T2021B504A
(B,E,S,V)T2021B505A

SYSCON PCB (U) T2021B502A

PRE AMP PCB

DETECTOR PCB
(U)T2021B502B
(C,A)T2021B504B
(B,E,S,V)T2021B505B

2SB808-V
2SD1012-V
2SA733
2SA733A
2SA984K
2SC2274K
2SC1061
2SD794
2SD894

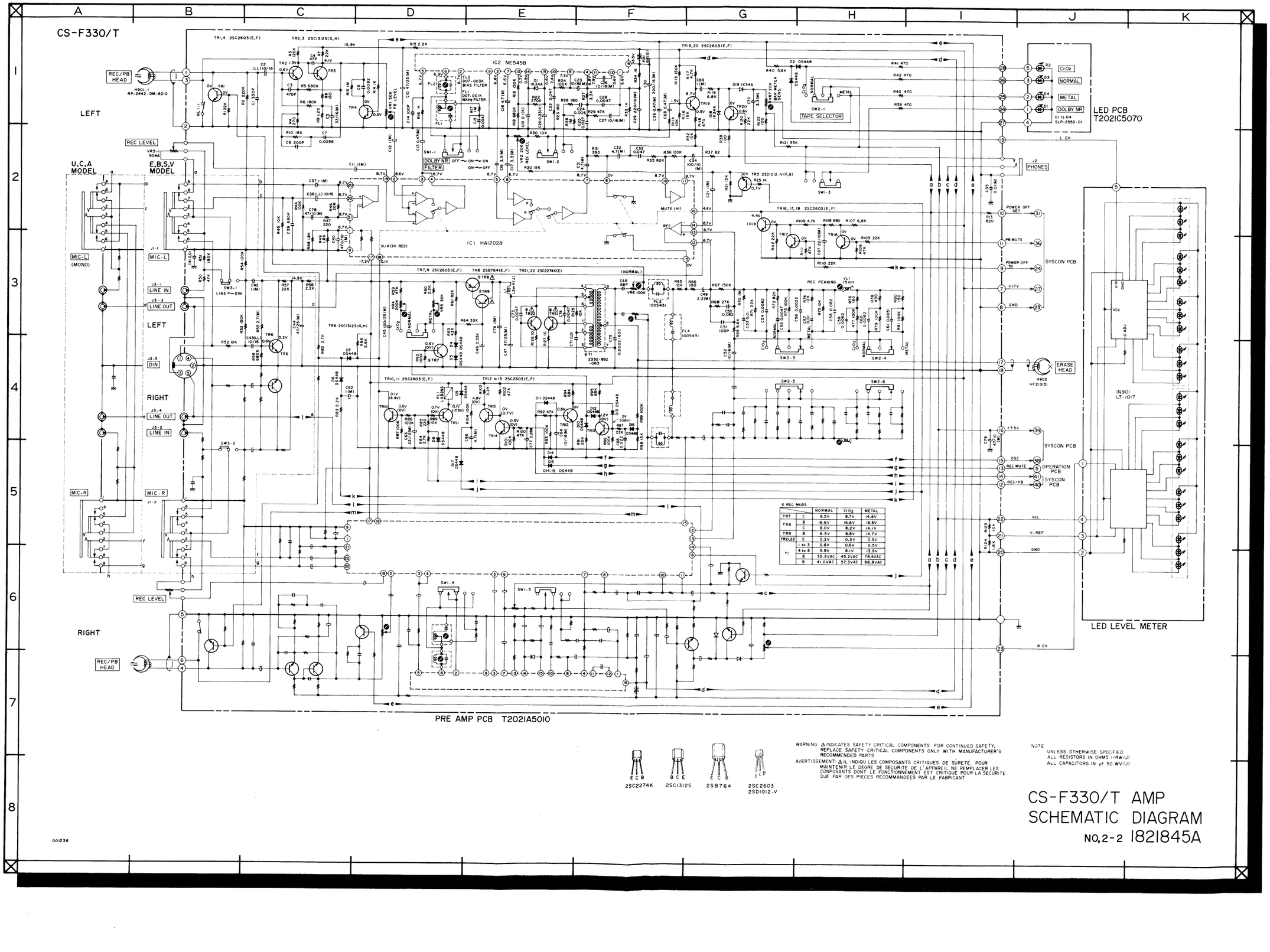
WARNING: △INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: △IL INDIQU LES COMPOSANTS CRITIQUES DE SÜRETÉ. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES CONPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)

001235A

CS-F330/T



CS-F330/T AMP SCHEMATIC DIAGRAM

NO.2-2 1821845A

AKAI PRELIMINARY SERVICE MANUAL

No. 1

MODEL CS-F330, AP-Q330 DATE JUNE 1981

SECTION 1 MODEL CS-F330

I. SPECIFICATIONS

Track System	4 Track 2 Channel Stereo System
Tape	Philips Type Cassette
Tape Speed	4.76 cm/s ± 1.0% (1-7/8 ips. ± 1.0%)
Heads	Erase head x 1 High Density Metallic head for recording/playback x 1
Motors	Electronically speed controlled DC motor for Capstan drive x 1 DC motor for reel drive x 1
Wow & Flutter	Less than 0.04% WRMS, 0.11% (DIN 45500)
Tape Winding Time	80 sec. using a C-60 cassette tape
Frequency Response	Normal: 30 to 15,000 Hz ± 3 dB (-20 VU) CrO_2: 30 to 16,000 Hz ± 3 dB (-20 VU) 30 to 8,000 Hz ± 3 dB (0 VU) Metal: 30 to 18,000 Hz ± 3 dB (-20 VU) 30 to 12,000 Hz ± 3 dB (0 VU)
Signal to Noise Ratio	Normal: Better than 57 dB CrO_2: Better than 59 dB Metal: Better than 59 dB (measured via tape with peak recording level) Dolby NR switch ON: improves up to 10 dB above 5 kHz
Harmonic Distortion	Normal: Less than 0.8% CrO_2: Less than 0.8% Metal: Less than 0.8%
Input	MIC: 0.25 mV (input impedance 5.0 kohms) Required microphone impedance: 600 ohms Line: 70 mV (input impedance 47 kohms)
Output	Line: 410 mV at 0 VU Required load impedance: more than 20 kohms
Power Requirements	120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/120V/220V/240V, 50/60 Hz internally switchable for other countries.
Dimensions	440(W) x 125(H) x 288(D) mm (17.3 x 4.9 x 11.3")
Weight	6.95 kg (15.3 lbs)

Specifications Model: Infrared Ray Wireless Remote Control Unit

System	Infrared Ray PCM System
Carrier Frequency	38 kHz
Area of Operation	8 m on axis (at DC 3V)
Directivity	± 30° (at 5 m)
Power Requirements	DC 3V (two UM, AM, AA-3 or R6 size batteries)
Dimensions	70(W) x 20(H) x 162(D) mm (6.7 x 0.8 x 6.4 inches)
Weight	140 g (without batteries) (4.9 oz.) 330

* For improvement purposes, specifications and design are subject to change without notice.
* "Dolby" and the Double D symbol are trademarks of Dolby Laboratories. (Manufactured under license from Dolby Laboratories.)

AKAI ELECTRIC CO., LTD.
12-14, 2-chome, Higashi-Kojiya, Ohta-ku, Tokyo, Japan.
Printed in Japan.

II. VOLTAGE CONVERSION

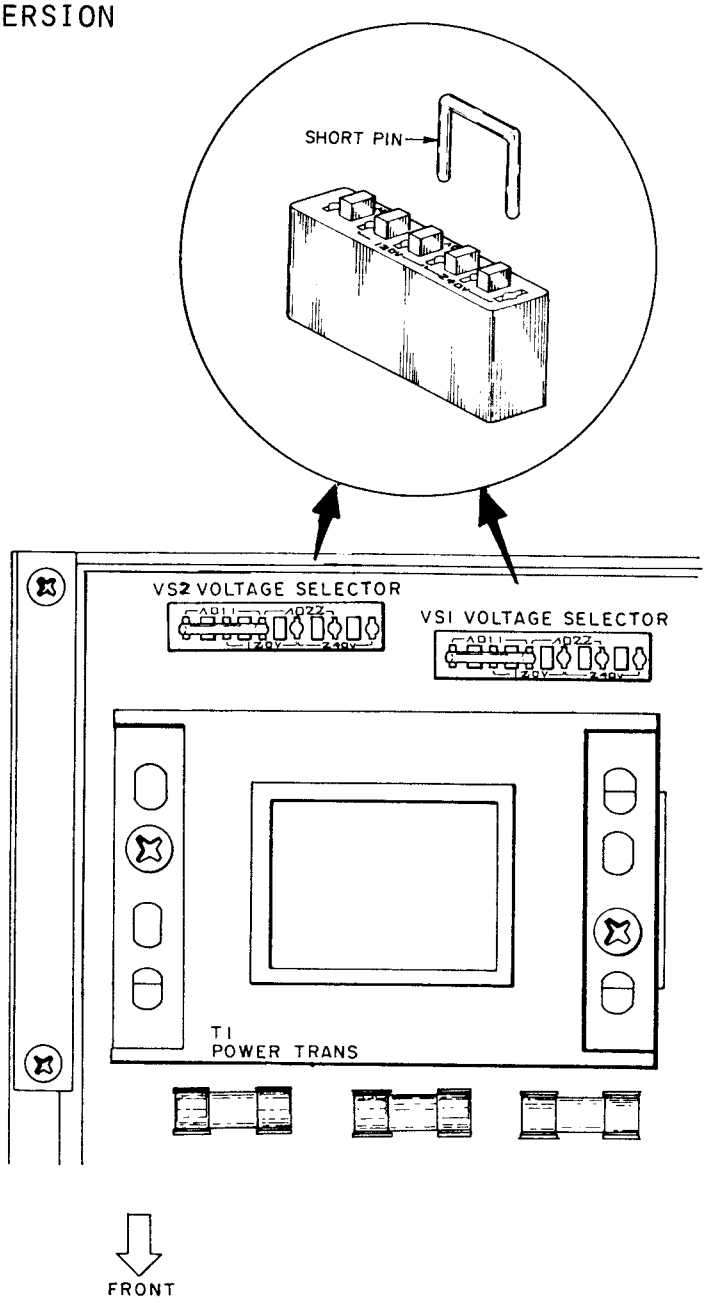


Fig. 1 Voltage Conversion (U/T Model only)

1. VOLTAGE CONVERSION

Models for canada, Europe, USA, UK and Australia are not equipped with this facility.

Each machine is preset at the factory according to destination, but some machines can be set to 110V, 120V, 220V or 240V as required.

If voltage change is necessary, this can be accomplished as follows:

1) Disconnect power cord.
2) Loosen holding screws and remove upper cover.
3) Remove short pin plug from present holes and replace in correct holes. Follow the markings explicitly.

III. MECHANISM AND HEAD ADJUSTMENT

Please refer to Service Manual CS-F9 or CS-F11.

IV. AMPLIFIER ADJUSTMENT

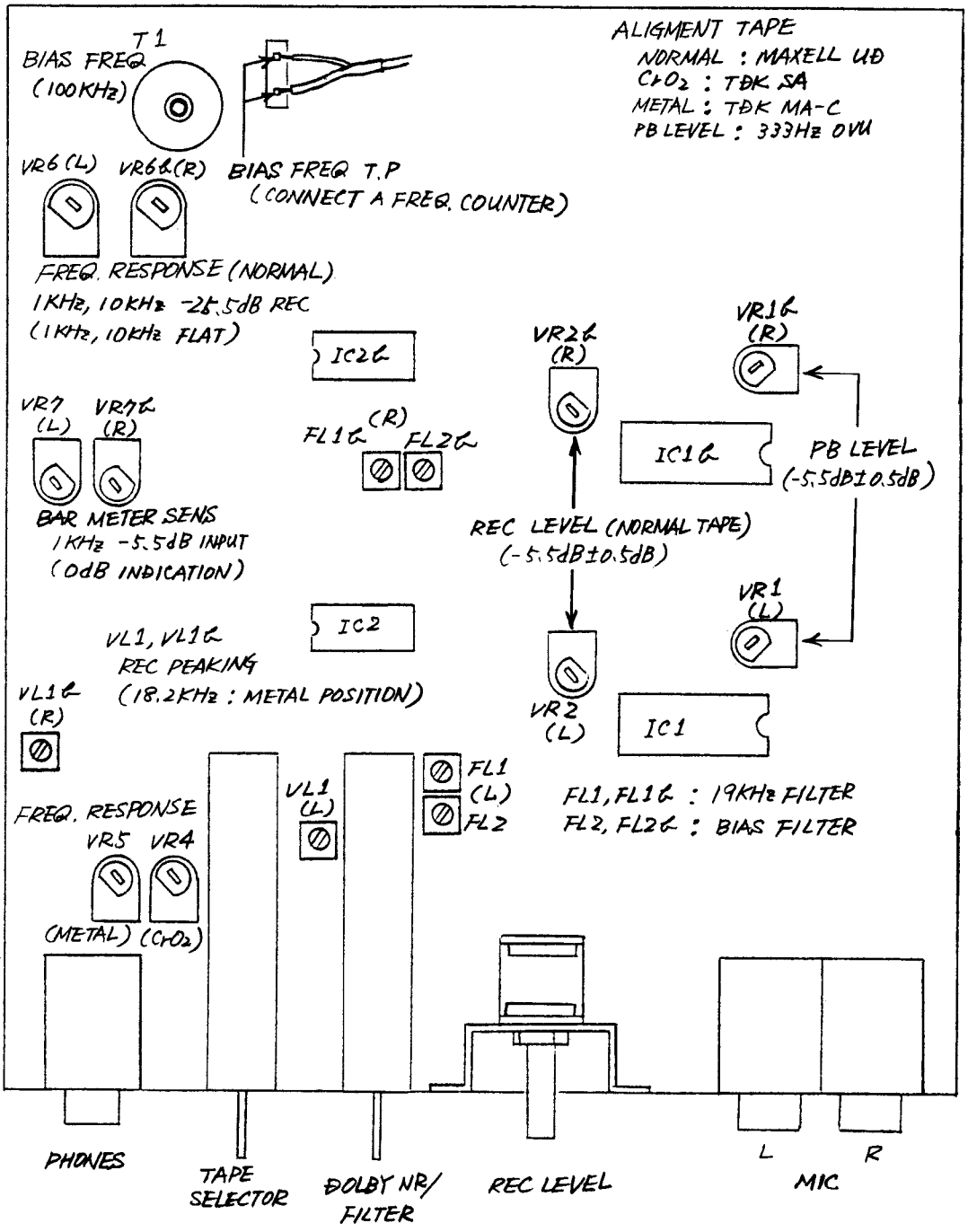


Fig. 2 Amplifier Adjustment

V. RECEIVER ADJUSTMENT (REMOTE CONTROL)

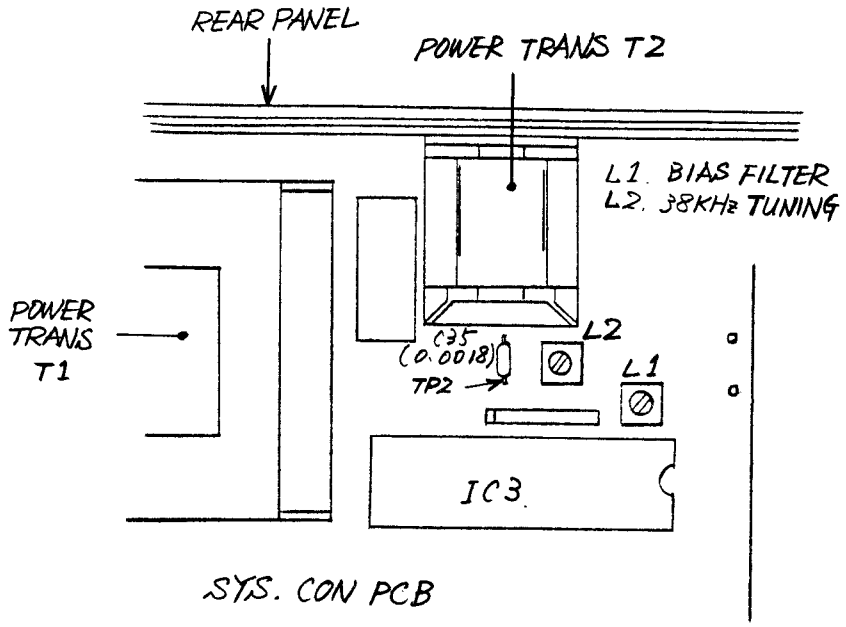


Fig. 3

1. 38 kHz TUNING COIL ADJUSTMENT (Refer to Fig. 3)
   1) Connect an oscilloscope to TP2.
   2) Keep pushing the REC MUTE button on the remote control unit, and observe the waveform at TP2.
   3) Change the direction of the remote control unit to decrease the input to the detector as much as possible (for example by transmitting toward the wall and receiving the reflected wave).
   4) Adjust L2 so that the amplitude of the waveform at TP2 increases to the maximum.

   NOTE: If the waveform amplitude remains unchanged when L2 is turned, it is because the input level is so high as to cause the receiving circuit's AGC to work. In this case, adjust after reducing the input to the detector.

VI. CLASSIFICATION OF VARIOUS P.C BOARDS

P.C BOARD TITLE	P.C BOARD NUMBER	REMARKS
Syscon P.C Board (U)	T2021B502A	U/T
Syscon P.C Board (C,A)	T2021B504A	CSA,AAL
Syscon P.C Board (E,B,S,V)	T2021B505A	CEE,UK,SAA,VDE
Pre Amp P.C Board	T2021C5010	
Operation P.C Board	T2021C5060	
LED P.C Board	T2021C5070	
Detector P.C Board (U)	T2021B502B	U/T
Detector P.C Board (C,A)	T2021B504B	CSA,AAL
Detector P.C Board (E,B,S,V)	T2021B505B	CEE,UK,SAA,VDE
PHOTO LED P.C Board (U)	T2021B502C	U/T
PHOTO LED P.C Board (C,A)	T2021B504C	CSA,AAL
PHOTO LED P.C Board (E,B,S,V)	T2021B505C	CEE,UK,SAA,VDE

SECTION 2 MODEL AP-Q330

I. SPECIFICATIONS

Turntable	Aluminum alloy diecast
Drive System & Mechanism	Quartz Locked Direct Drive Fully Automatic
Motor	DC Servo motor
Wow and Flutter	0.045% (DIN), 0.03% (JIS)
Rumble	45 dB (DIN A), 70 dB (DIN B)
Tone Arm	Static balanced
Effective Arm Length	220 mm
Stylus Pressure Adjustment Range	0 to 3 grams
Applicable Cartridge Weight	3 to 11 grams
Arm Lifter	Oil damped
Overhang	15 mm
Offset Angle	22°30'
Horizontal Tracking Error Angle	+3°5', -1°13'
Cartridge	MM (Dual Moving Magnet) type
Output Voltage	5 mV (DIN)
Channel Separation	More than 20 dB (DIN 45541)
Optimal Stylus Pressure	2 grams
Static Vertical Compliance	17.7×10^{-6} cm/dyne
Static Horizontal Compliance	29.1×10^{-6} cm/dyne
Power Requirements	120V, 60 Hz for Canada and USA 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110-120/220-240V, 50/60 Hz for the other countries
Dimensions	440(W) x 129(H) x 375(D) mm (17.3 x 5.1 x 14.8) inches
Weight	6.5 kg (14.3 lbs)

* For improvement purposes, specifications and design are subject to change without notice.

II. VOLTAGE CONVERSION

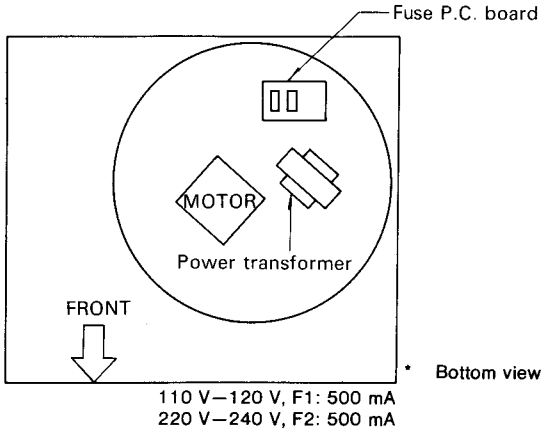


Fig. 1 Voltage Conversion

Models for Canada, USA, Australia and Europe are not equipped with this facility. This machine can be set to 110-120V/220-240V as required. Each machine is preset at the factory according to destination but if voltage change is necessary it can be accomplished as follows only by qualified personnel.

1. Disconnect power supply cord.
2. Remove the bottom cover.
3. Remove existing Line Voltage Fuse and insert required Line Voltage Fuse in the proper fuse holder according to the printed instructions.

III. MECHANICAL ADJUSTMENT

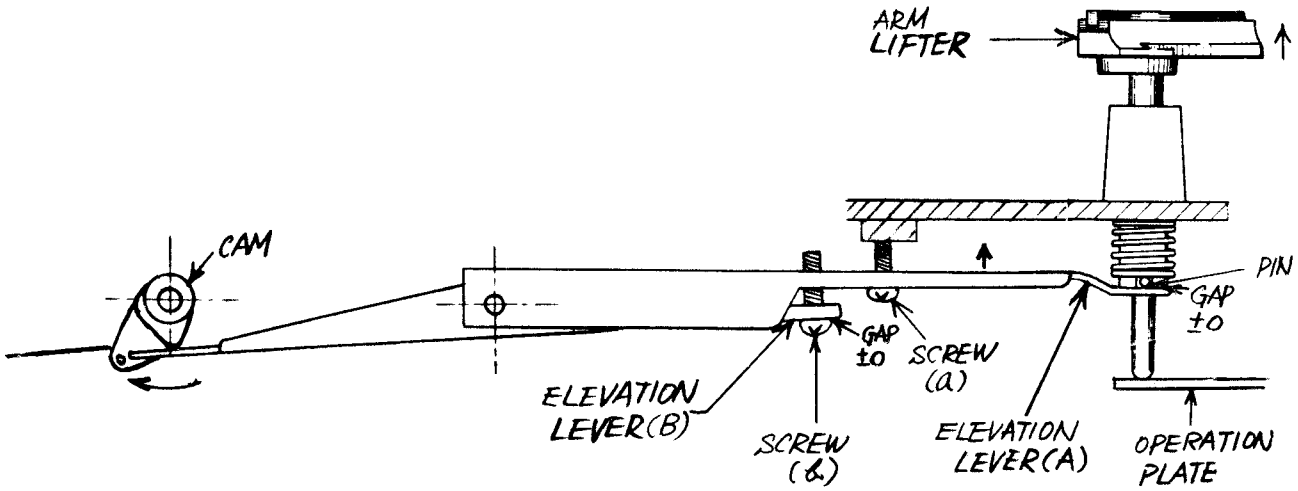


Fig. 2

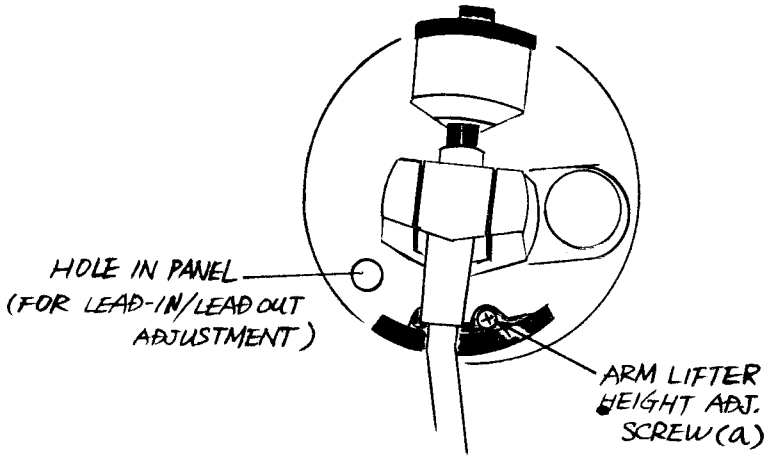


Fig. 3

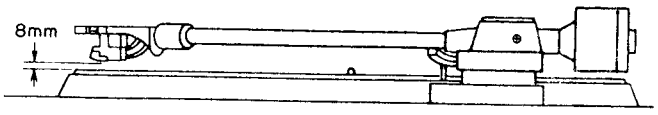


Fig. 4

1. ARM LIFTER ADJUSTMENT (Refer to Figs. 2, 3, 4)
   1) Set the cue lever to ▼.
   2) Operate CUT/RETURN or manually turn the main gear to raise the arm lifter.
   3) Set the cue lever to ▼.
   4) Turn screw (b) counterclockwise until there is a clearance between the head of screw (b) and elevation lever (B). (Fig. 2)
   5) Turn screw (a) clockwise until there is a clearance between elevation lever (A) and pin. (Fig. 2)
   6) Turn screw (a) counterclockwise until elevation lever (A) touches the pin. (Fig. 2)
   7) Turn screw (b) clockwise until elevation lever (B) touches the head of screw (b). (Fig. 2)
   8) Check that the arm lifter rises to the same height or nearly to the same height regardless of whether it is raised by CUT/RETURN or the cue lever.
   9) Adjust screw (a) so that the clearance between the record surface and the tip of the stylus will be 8 mm when the arm lifter is raised. (Figs. 3, 4)

2. LEAD-IN, LEAD-OUT ADJUSTMENT (Refer to Fig. 3)
   1) Lead-in Position:
      a. Place a record on the Platter.
      b. Set the SIZE SELECTOR according to the record.
      c. Play back the record automatically and confirm where the Stylus descends.
      d. Return the Tone Arm to the Tone Arm Rest.
         * The Lead-in Adjustment Screw is visible only when the Tone Arm is on the Tone Arm Rest.
      e. Adjust the Lead-in Adjustment Screw with a screwdriver:
         Turn clockwise: To make the Stylus descend towards the Spindle.
         Turn counterclockwise: To make the Stylus descend away from the Spindle.
   2) Lead-out Position:
      a. Play back a record and confirm where auto-return begins.
      b. Move the Tone Arm towards the Spindle until the Lead-out Adjustment Screw is visible.
      c. Adjust the Lead-out Adjustment Screw with a screwdriver:
         Turn clockwise: To delay auto-return.
         Turn counterclockwise: To hasten auto-return.
         * Carry out both adjustments little at a time and confirm the position after each adjustment.

3. RETURN PLUNGER INSTALLATION POSITION ADJUSTMENT

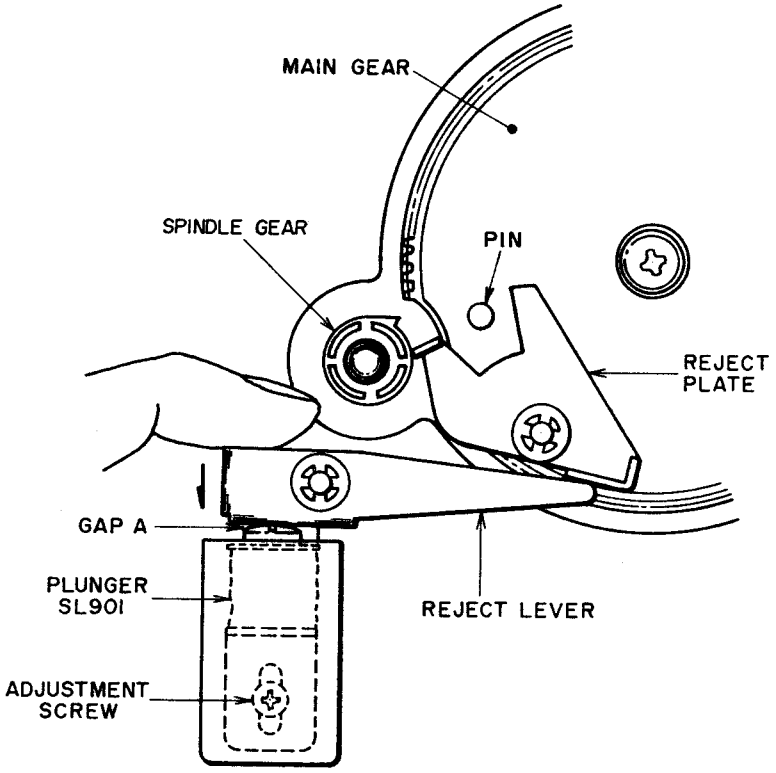


Fig. 5

Press the Reject Lever with your finger until the Reject Plate touches the Spindle Gear when the motor is attached as shown in the illustration.
At this time, adjust the position of the Plunger so that the Gap A between the Reject Lever and Plunger disappears.
After adjustment, confirm that the Auto Return operates.

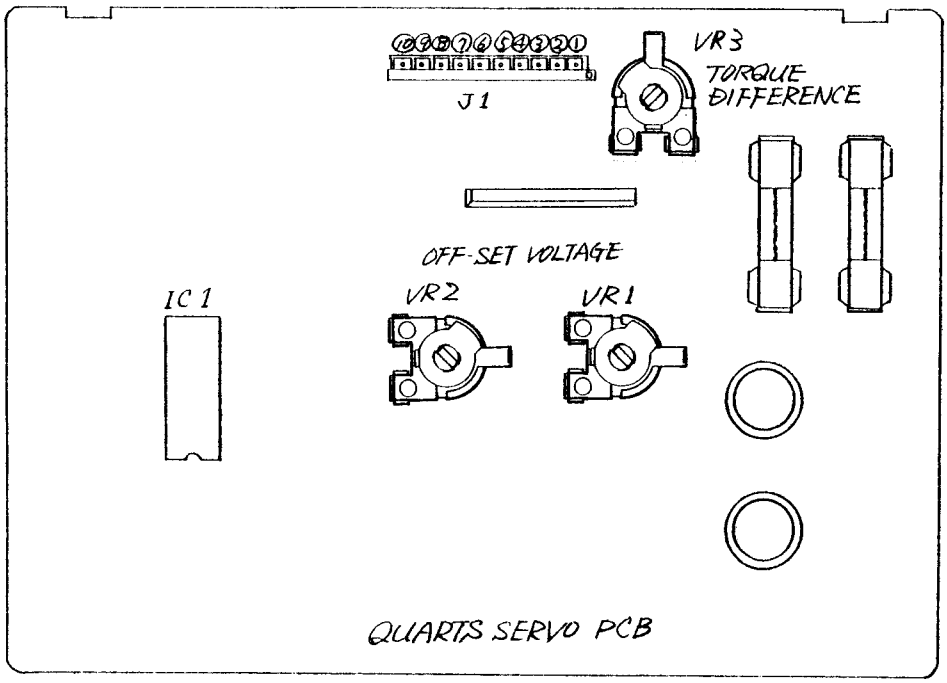


Fig. 6

IV. ELECTRICAL ADJUSTMENT (REFER TO FIG. 6)

1. OFF-SET VOLTAGE ADJUSTMENT (VR1, 2) AND TORQUE DIFFERENCE ADJUSTMENT (VR5)
   1) Disconnect the motor connection cord (J1).
   2) Short connector (J1) pins (3), (4) and (8).
   3) Set VR3 to the center.
   4) Turn the power switch ON.
   5) Connect an digital voltmeter to terminal (1) of connector J1 and adjust VR2 until it reads -120 mVDC.
   6) Turn the power switch OFF.
   7) Short connector (J1) pins (6), (7) and (8).
   8) Turn the power switch ON.
   9) Connect an digital voltmeter to terminal (2) of connector J1 and adjust VR1 until it reads -120 mVDC.
   10) Turn the power switch OFF and connect the motor connection wire to connector (J1).
   11) Turn the power switch ON.
   12) Connect an oscilloscope to (1) and (2) of connector (J1) Adjust VR3 until the voltage is the same at both (1) and (2) terminals of connector (J1).

2. WOW AND FLUTTER CONFIRMATION

1) Playback the test record (3,000 Hz).

2) Confirm that the Wow and Flutter is within 0.03% (JIS).

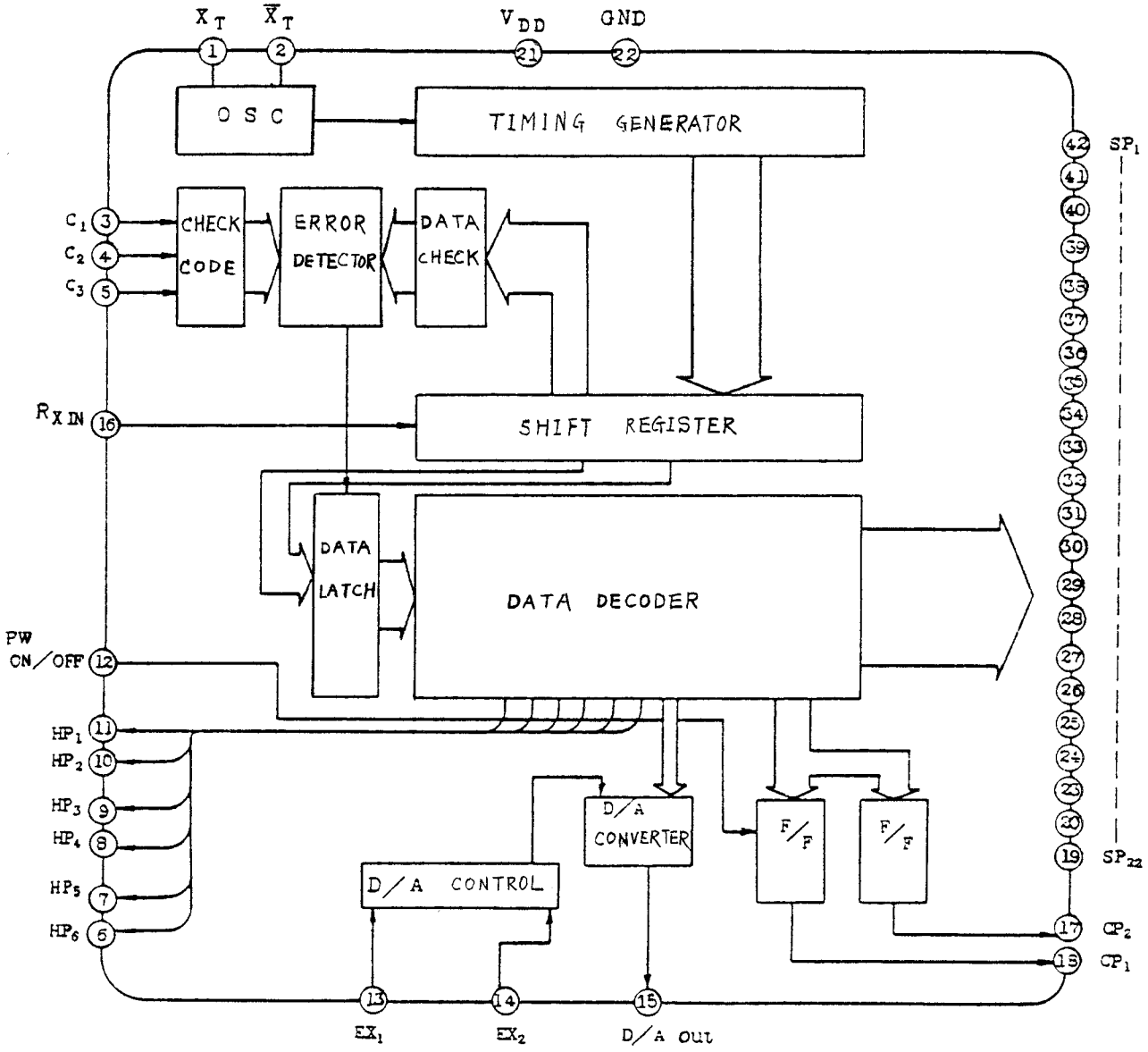
3) If not, re-adjust VR1, VR2 and VR3.

V. CLASSIFICATION OF VARIOUS P.C BOARDS

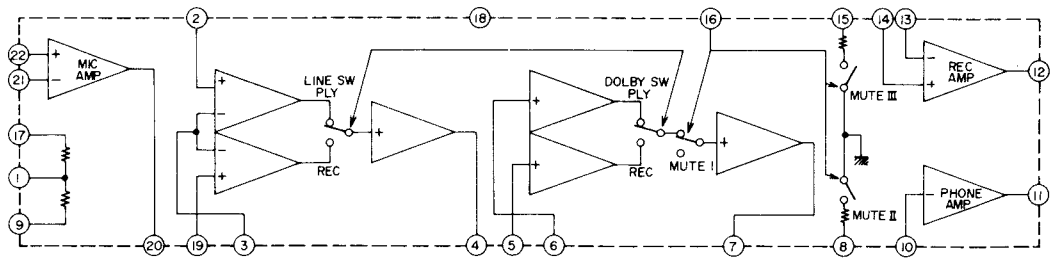
P.C BOARD TITLE	P.C BOARD NUMBER	REMARKS
Quartz Servo P.C Board	P1014C5010	
Syscon P.C Board	P1014C5020	
Push Switch P.C Board	P1014C508B	
Tact Switch P.C Board	P1014C508C	
LED P.C Board	P1014C5080	
Relay P.C Board	P1014D5070	CEE,UK,SAA,VDE
Lead Switch P.C Board	APD-4050	
Fuse P.C Board (U)	P1014A5030	U/T
Fuse P.C Board (C,A)	P1014A5040	CSA,AAL
Fuse P.C Board (E,S,V)	P1014A5050	CEE,SAA,VDE
Fuse P.C Board (B)	P1014A5060	UK

SECTION 3 SCHEMATIC DIAGRAM

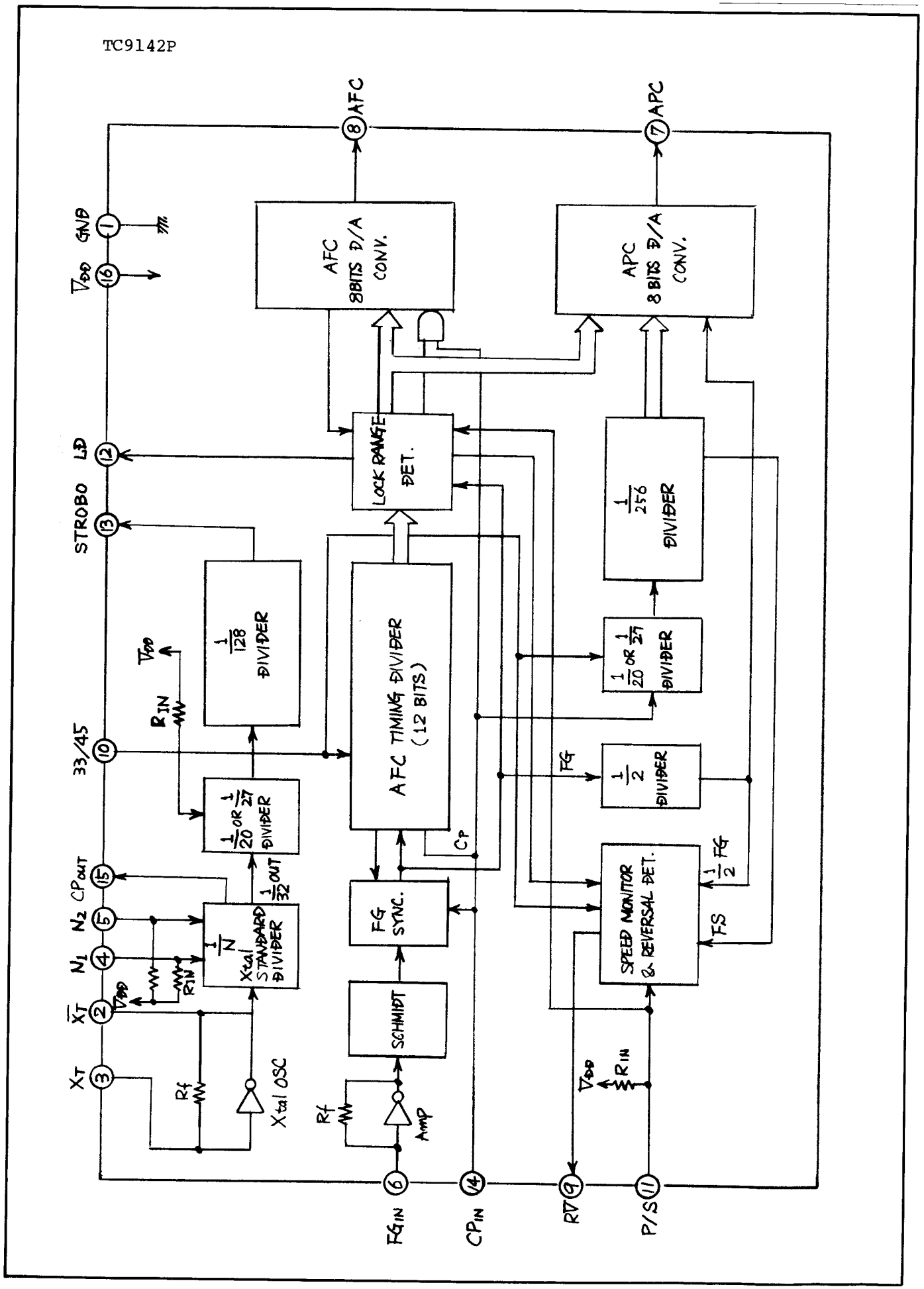
TC9134P



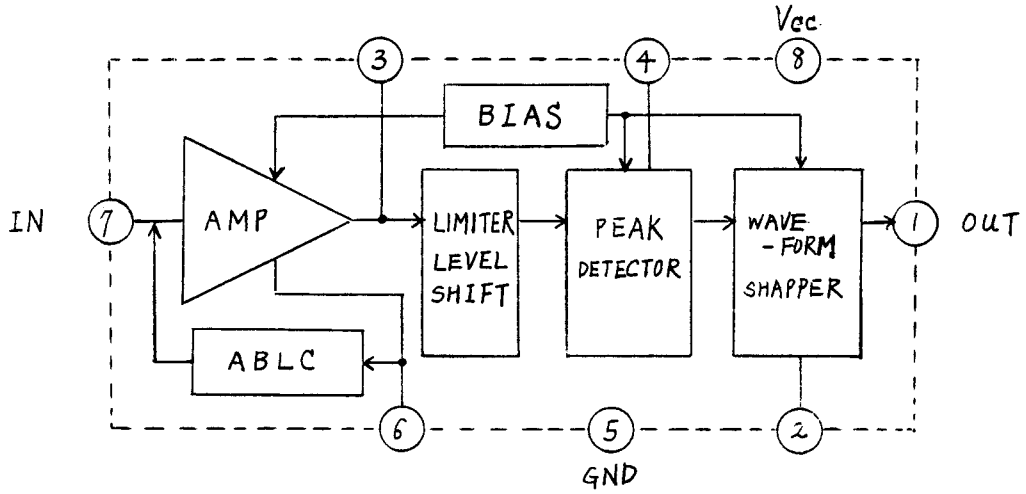
HA12028



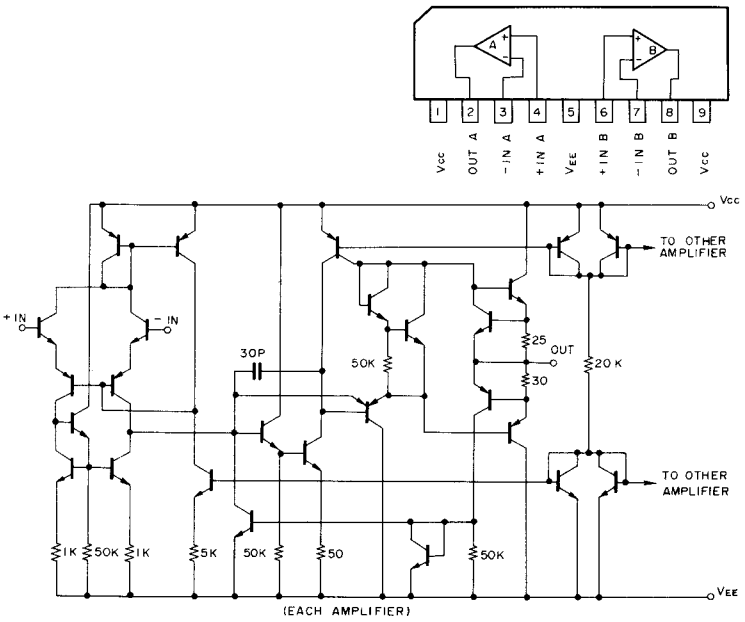
TC9142P


AFC
APC
GND
VDD
AFC 8BITS D/A CONV.
APC 8 BITS D/A CONV.
LD
STROBO
LOCK RANGE DET.
1/128 DIVIDER
1/256 DIVIDER
1/20 OR 1/27 DIVIDER
AFC TIMING DIVIDER (12 BITS)
33/45
RIN
1/2 DIVIDER
FG
CP
CPOUT
1/32 OUT
N2
N1
1/N Xtal STANDARD DIVIDER
FG SYNC.
SPEED MONITOR & REVERSAL DET.
1/2 FG
FS
XT
Rf
Xtal OSC
SCHMIDT
Amp
FGIN
CPIN
RD
P/S

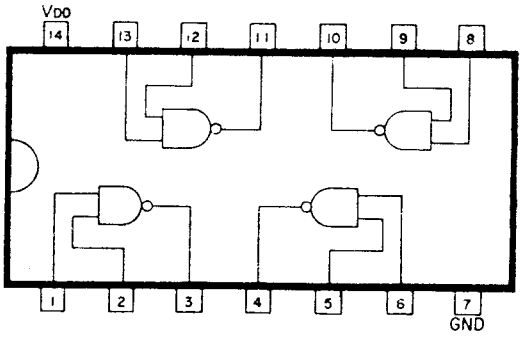
μPC1373H



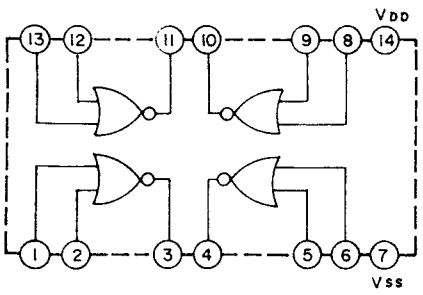
TA75458S



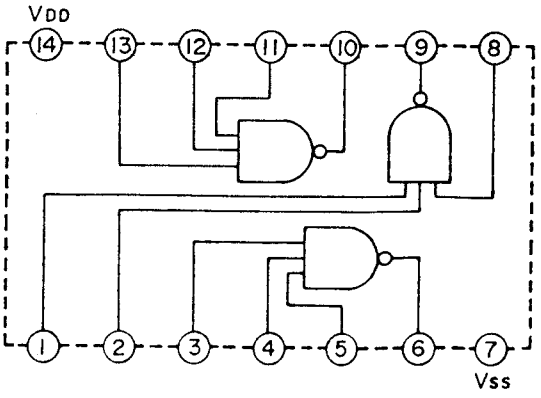
TC4001BP



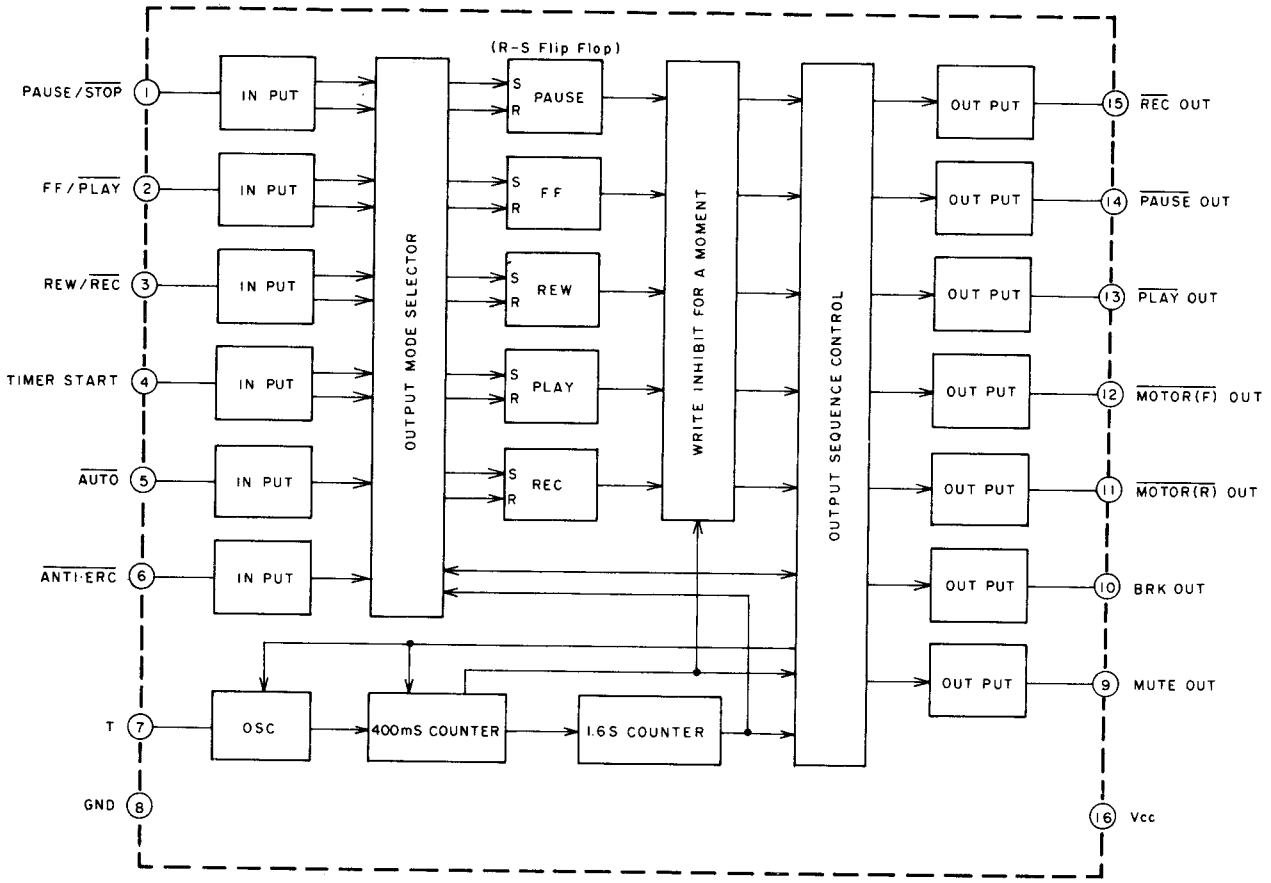
TC4011BP



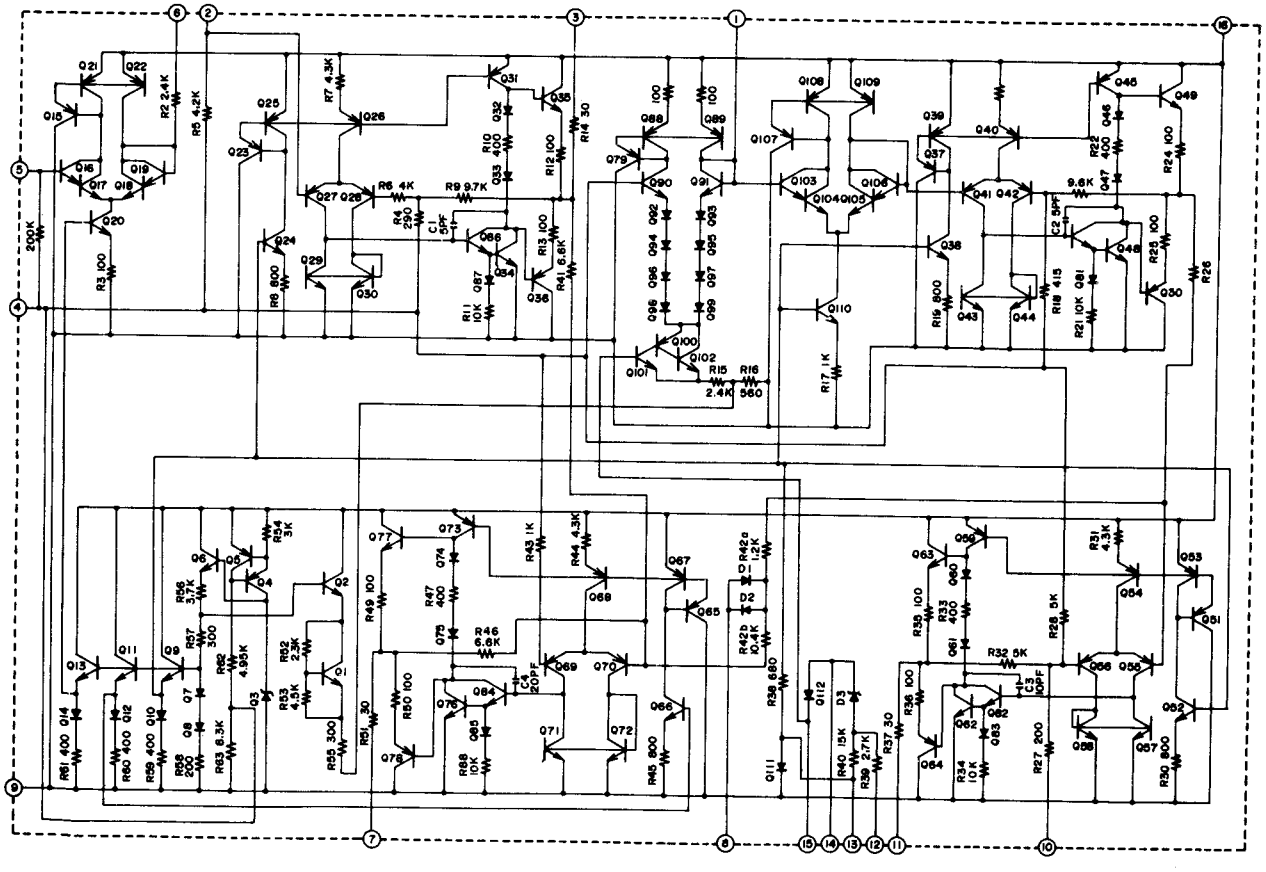
TC4023BP

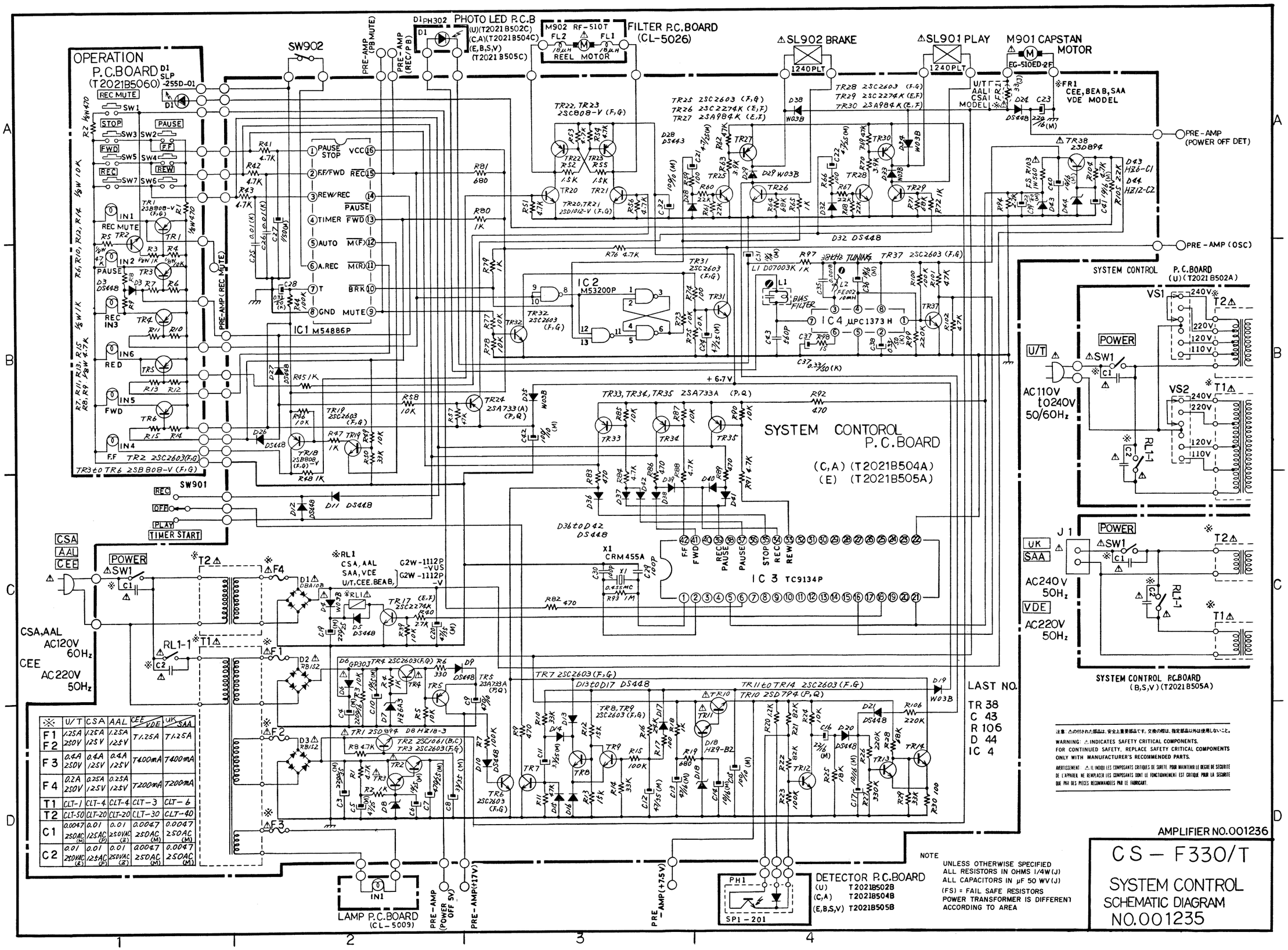


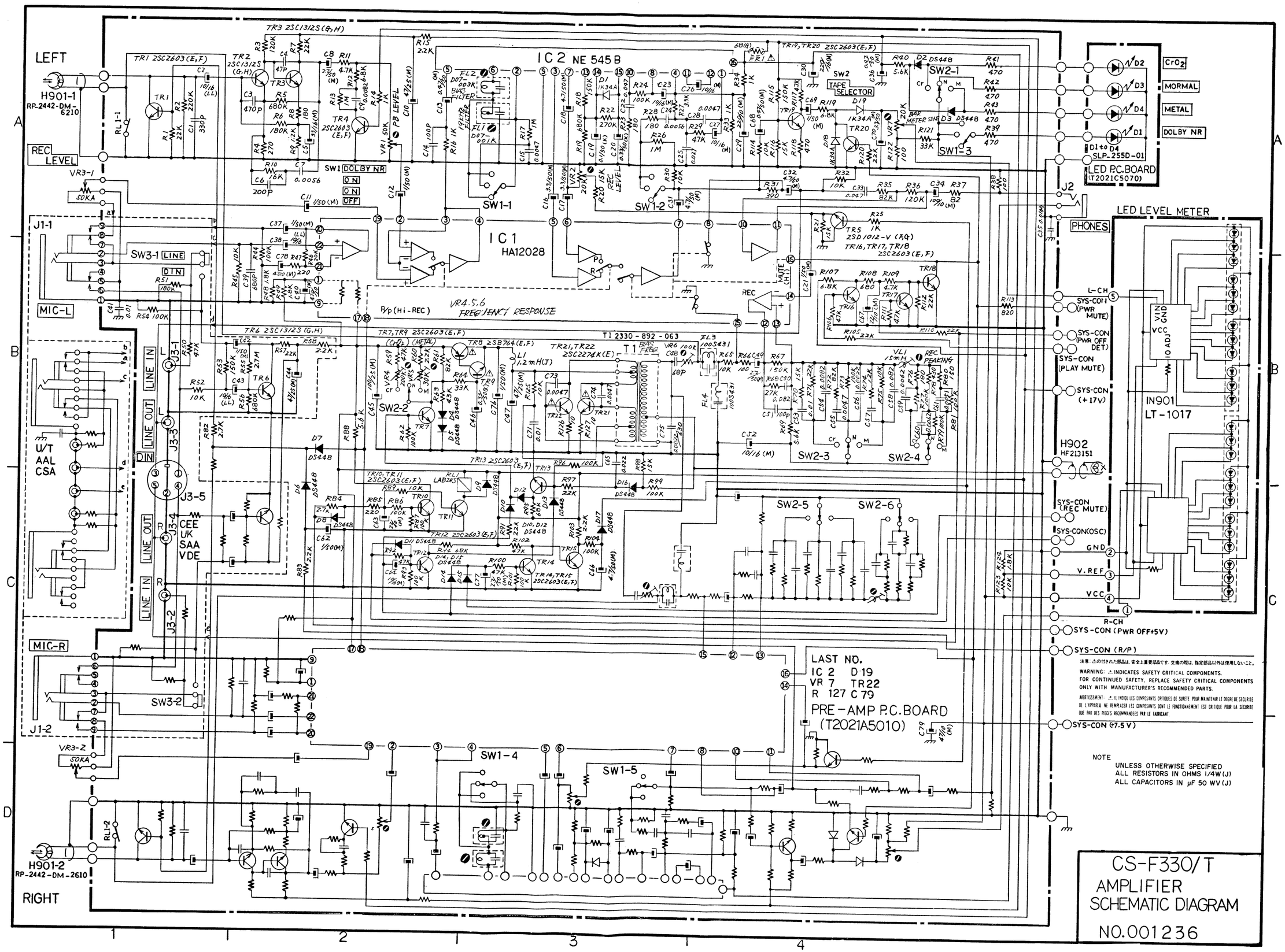
M54886P

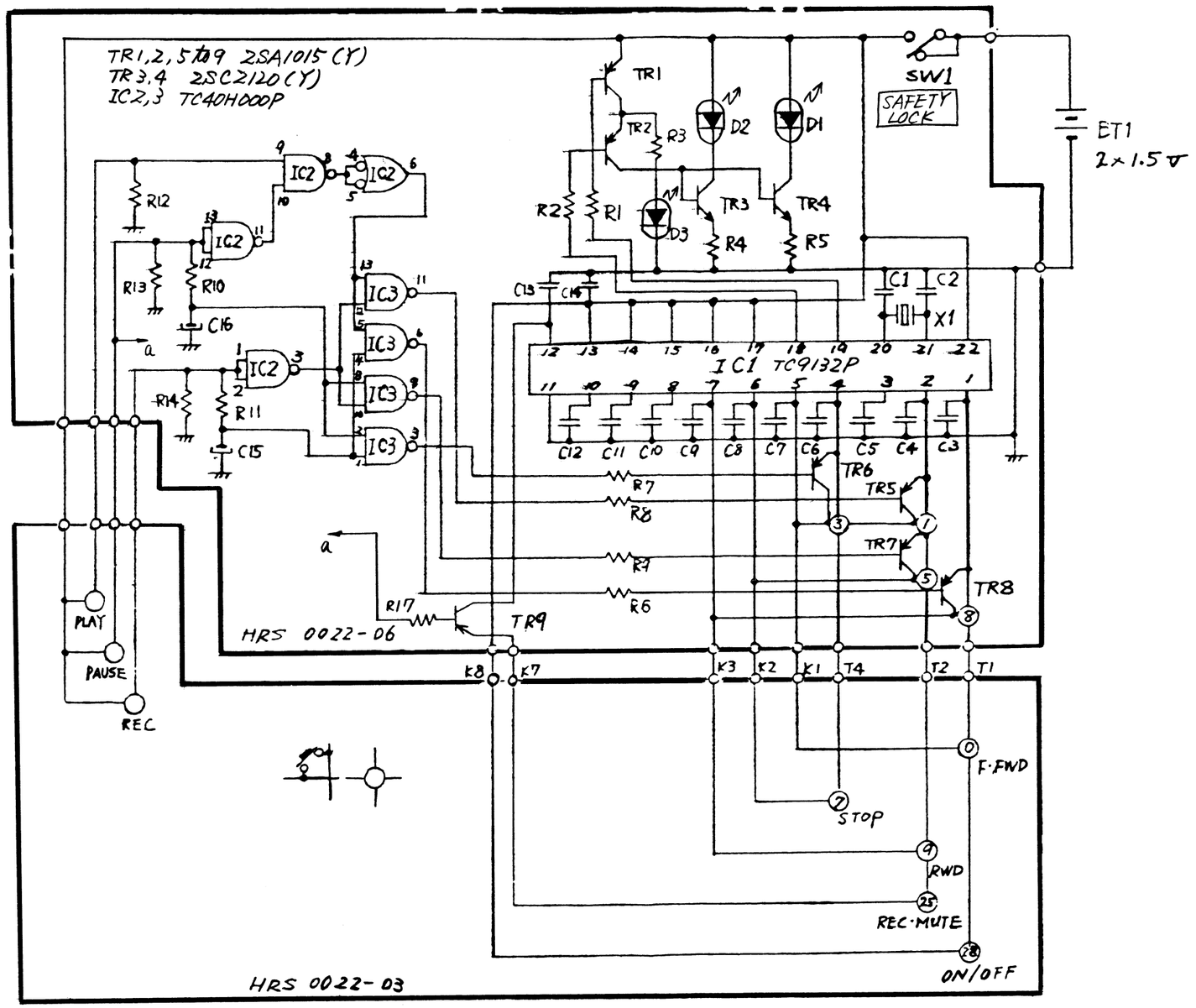


NE545B



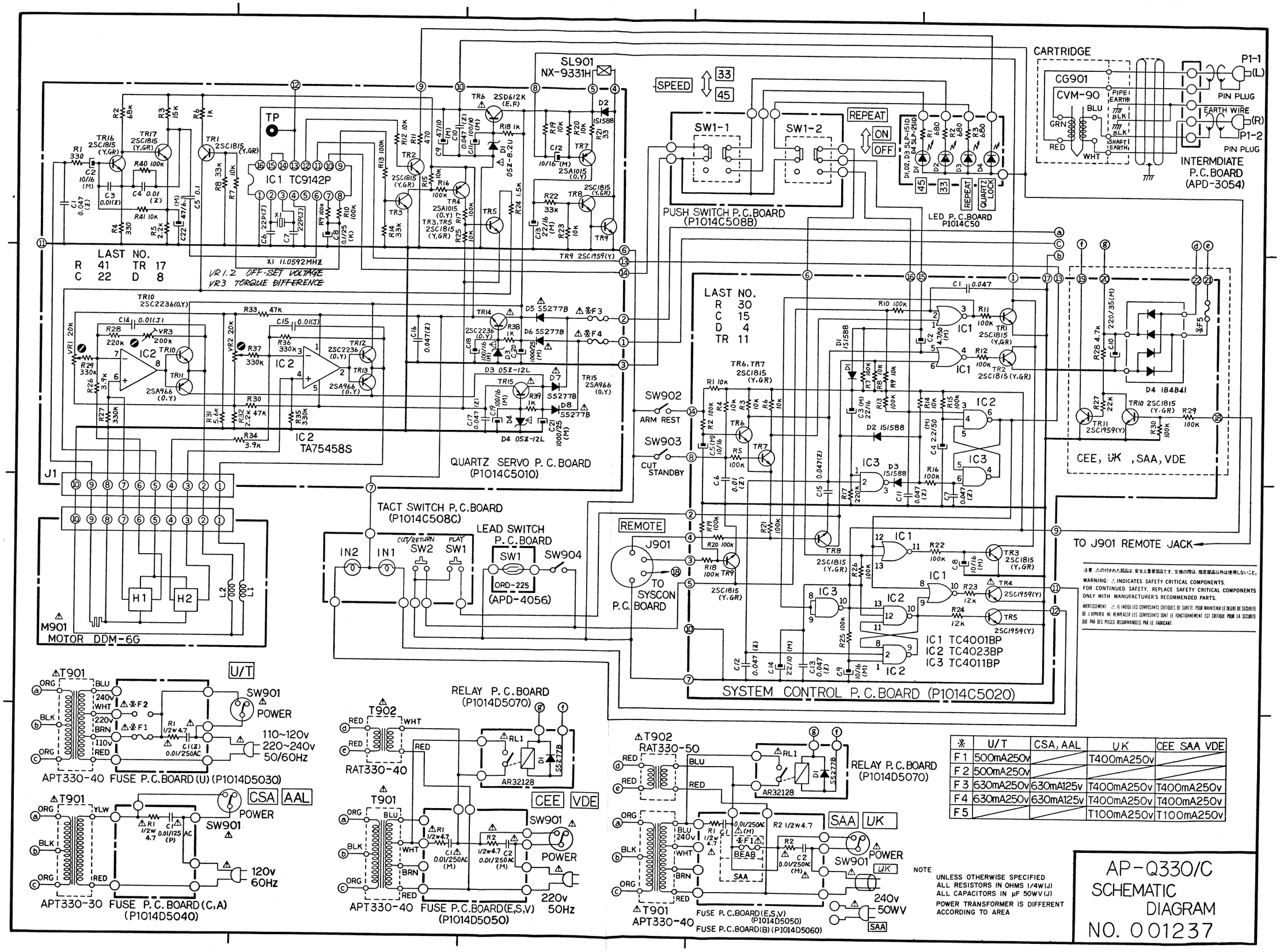

OPERATION P.C.BOARD (T2021B5060)
SW902
PRE-AMP (PB MUTE)
PRE-AMP (REC/PB)
D1 PH302 PHOTO LED P.C.B
(U)(T2021B502C)
(C,A)(T2021B504C)
(E,B,S,V)(T2021B505C)
M902 RF-510T REEL MOTOR
FILTER P.C.BOARD (CL-5026)
SL902 BRAKE 1240PLT
SL901 PLAY 1240PLT
M901 CAPSTAN MOTOR EG-510ED-2F
※FR1 CEE, BEAB, SAA VDE MODEL
PRE-AMP (POWER OFF DET)
PRE-AMP (OSC)
IC1 M54886P
IC2 M53200P
IC4 μPC1373H
SYSTEM CONTROL P.C.BOARD (U)(T2021B502A)
SYSTEM CONTOROL P.C.BOARD (C,A) (T2021B504A) (E) (T2021B505A)
IC3 TC9134P
X1 CRM455A
SW901
REC
OFF
PLAY
TIMER START
CSA
AAL
CEE
POWER
SW1
AC110V to 240V 50/60Hz
AC120V 60Hz
AC220V 50Hz
AC240V 50Hz
RL1-1
RL1 CSA, AAL SAA, VDE U/T, CEE, BEAB, G2W-1112P -VUS G2W-1112P -V
LAMP P.C.BOARD (CL-5009)
DETECTOR P.C.BOARD (U) T2021B502B (C,A) T2021B504B (E,B,S,V) T2021B505B
SP1-201
SYSTEM CONTROL P.C.BOARD (B,S,V)(T2021B505A)
LAST NO. TR 38 C 43 R 106 D 44 IC 4
AMPLIFIER NO.001236
CS-F330/T
SYSTEM CONTROL SCHEMATIC DIAGRAM NO.001235
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF 50 WV (J)
(FS) = FAIL SAFE RESISTORS
POWER TRANSFORMER IS DIFFERENT ACCORDING TO AREA
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.


LEFT
H901-1
RP-2442-DM-6210
REC LEVEL
VR3-1
50KA
J1-1
MIC-L
SW3-1 LINE
DIN
U/T
AAL
CSA
LINE IN
LINE OUT
J3-1
J3-3
J3-5
J3-4
CEE
UK
SAA
VDE
J3-2
MIC-R
J1-2
VR3-2
SW3-2
H901-2
RP-2442-DM-2610
RIGHT
RL1-1
RL1-2
TR1 2SC2603(E,F)
TR2 2SC1213S (G,H)
TR3 2SC1213S(G,H)
TR4 2SC2603 (E,F)
PB LEVEL
SW1 DOLBY NR
ON
ON
OFF
SW1-1
SW1-2
SW1-3
SW1-4
SW1-5
IC 1
HA12028
IC 2 NE 545B
BIAS FILTER
FL1
FL2
D07-003K
D07-001K
TR5 2SD1012-V (F,G)
TR16,TR17,TR18
2SC2603(E,F)
TR19,TR20 2SC2603(E,F)
SW2 TAPE SELECTOR
SW2-1
SW2-2
SW2-3
SW2-4
SW2-5
SW2-6
BAR METER SHAG
D1 to D4
SLP-255D-01
LED P.C.BOARD
(T2021C5070)
CrO2
MORMAL
METAL
DOLBY NR
J2
PHONES
LED LEVEL METER
IN901
LT-1017
H902
HF213151
L-CH
R-CH
SYS-CON (PWR MUTE)
SYS-CON (PWR OFF DET)
SYS-CON (PLAY MUTE)
SYS-CON (+17V)
SYS-CON (REC MUTE)
SYS-CON(OSC)
GND
V.REF
VCC
SYS-CON (PWR OFF+5V)
SYS-CON (R/P)
SYS-CON (7.5V)
T1 2330-892-063
FL3 100S431
FL4 100S431
VL1 15MH
REC PEAKING
MUTE (H)
REC
Bp(Hi-REC)
VR4.5.6 FREQUENCY RESPONSE
PRE-AMP P.C.BOARD
(T2021A5010)
LAST NO.
IC 2 D 19
VR 7 TR 22
R 127 C 79
注意：△の付された部品は、安全上重要部品です。交換の際は、指定部品以外は使用しないこと。
WARNING: △ INDICATES SAFETY CRITICAL COMPONENTS.
FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
AVERTISSEMENT: △ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF 50 WV(J)
CS-F330/T
AMPLIFIER
SCHEMATIC DIAGRAM
NO.001236



RC-330

SCHEMATIC DIAGRAM



※	U/T	CSA, AAL	UK	CEE SAA VDE
F1	500mA250v		T400mA250v	
F2	500mA250v			
F3	630mA250v	630mA125v	T400mA250v	T400mA250v
F4	630mA250v	630mA125v	T400mA250v	T400mA250v
F5			T100mA250v	T100mA250v